MAINVIEW® for WebSphere Reference Manual

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BMC Software, Inc.
2101 CityWest Blvd.
Houston TX 77042-2827
USA

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USA and Canada

Address	BMC Software, Inc. 2101 CityWest Blvd. Houston TX 77042-2827
Telephone	713 918 8800 or 800 841 2031
Fax	713 918 8000

Outside USA and Canada

Telephone	(01) 713 918 8800
Fax	(01) 713 918 8000

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  - — product name
  - — product version (release number)
  - — license number and password (trial or permanent)
- operating-system and environment information
  - — machine type
  - — operating system type, version, and service pack or program temporary fix (PTF)
  - — system hardware configuration
  - — serial numbers
  - — related software (database, application, and communication) including type, version, and service pack or PTF
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - — product error messages
  - — messages from the operating system
  - — messages from related software

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About This Book

The MAINVIEW® for WebSphere product provides full-featured monitoring and management; site-use analysis; transaction process monitoring; and display of Web server data.

This book presents examples of the views which display Web server data.

How This Book Is Organized

This book is organized as follows. In addition, a glossary and an index appear at the end of the book.

Chapter/Appendix	Description
Chapter 1, “Introducing MAINVIEW for WebSphere”	provides an introduction to the features and functions of MAINVIEW for WebSphere It also provides information on the MAINVIEW window interface and product navigation.
Chapter 2, “Getting Ready to Use MAINVIEW for WebSphere”	provides information that is required for preparing, installing, and customizing MAINVIEW for WebSphere for operation in your environment The chapter also includes checklists with a summary of steps needed to install and run MAINVIEW for WebSphere.
Chapter 3, “Logging On to MAINVIEW for WebSphere”	explains how to log on to MAINVIEW for WebSphere and how to exit the product
Chapter 4, “Using MAINVIEW for WebSphere”	explains the MAINVIEW for WebSphere views that are displayed on the MAINVIEW console
Appendix A, “Troubleshooting Tips”	provides tips to help resolve problems that you may encounter with MAINVIEW for WebSphere

Related Documentation

BMC Software products are supported by several types of documentation:

- online and printed books
- online Help
- release notes and other notices

In addition to this book and the online Help, you can find useful information in the publications listed in the following table. As “Online and Printed Books” on page xv explains, these publications are available on request from BMC Software.

Category	Document	Description
installation documents	*Product Installation and Maintenance Guide for (CPO and SMP/E)*	provides information about product distribution, installation methods, installation requirements, creating product libraries with CPO or SMP, applying SMP maintenance, tape formats, FMIDs, and SYSMODs
core documents	*MAINVIEW Administration Guide*	provides information about MAINVIEW operations, targets, single-system image contexts, MAINVIEW Alarm Manager, data sets, view customization, and diagnostic facilities
	MAINVIEW Implementation Guide	provides instructions for manually customizing the MAINVIEW environment for your products
	Using MAINVIEW	provides information about working with MAINVIEW products in windows mode and full-screen mode
	Quick Start with MAINVIEW	provides a quick reference for MAINVIEW terminal sessions, logs, data sets, targets, contexts, windows mode and full-screen mode
	MAINVIEW Command List	describes the function, syntax, and parameters of the commands used to manage the MAINVIEW window environment
	MAINVIEW Alarm Manager User Guide	explains how to create and install alarm definitions that indicate when exceptions occur in a sysplex
establishing SAF security for MAINVIEW products	*Implementing Security for MAINVIEW products*	explains basic MAINVIEW security, enhanced security, and MAINVIEW Alternate Access security

Category	Document	Description
supplemental documents	*MAINVIEW Explorer Implementation and User Guide*	explains how to install and use the host server and client software to access MAINVIEW products running on the mainframe from a Web browser
	release notes, flashes, technical bulletins	provide updated information about MAINVIEW for WebSphere

Online and Printed Books

The books that accompany BMC Software products are available in online format and printed format. If you are a Windows or Unix user, you can view online books with Acrobat Reader from Adobe Systems. The reader is provided at no cost, as explained in "To Access Online Books." You can also obtain additional printed books from BMC Software, as explained in "To Request Additional Printed Books."

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Online books are formatted as Portable Document Format (PDF) files. You can view them, print them, or copy them to your computer by using Acrobat Reader 3.0 or later.You can access online books from the documentation compact disc (CD) that accompanies your product or from the World Wide Web.

In some cases, installation of Acrobat Reader and downloading the online books is an optional part of the product-installation process. For information about downloading the free reader from the Web, go to the Adobe Systems site at **http://www.adobe.com**.

To view any online book that BMC Software offers, visit the support page of the BMC Software Web site at **http://www.bmc.com/support.html**. Log on and select a product to access the related documentation. (To log on, first-time users can request a user name and password by registering at the support page or by contacting a BMC Software sales representative.)

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BMC Software provides printed books with your product order. To request additional books, go to **http://www.bmc.com/support.html.**

Online Help

MAINVIEW for WebSphere includes online Help. In the MAINVIEW for WebSphere ISPF interface, you can access Help by pressing **F1** from any ISPF panel.

Release Notes and Other Notices

Printed release notes accompany each BMC Software product. Release notes provide current information such as

- updates to the installation instructions
- last-minute product information

In addition, BMC Software sometimes provides updated product information between releases (in the form of a flash or a technical bulletin, for example). The latest versions of the release notes and other notices are available on the Web at **http://www.bmc.com/support.html**.

Conventions

This section provides examples of the conventions used in this book.

General Conventions

This book uses the following general conventions:

Item	Example
information that you are instructed to type	Type **SEARCH DB** in the designated field.
specific (standard) keyboard key names	Press **Enter**.
field names, text on a panel	Type the appropriate entry in the **Command** field.
directories, file names, Web addresses	The BMC Software home page is at **www.bmc.com**.
nonspecific key names, option names	Use the HELP function key.
MVS calls, commands, control statements, keywords, parameters, reserved words	Use the SEARCH command to find a particular object.

code examples, syntax statements, system messages, screen text	`//STEPLIB DD`
	
	`The table` *`table_name`* `is not available.`

emphasized words, new terms, variables	The instructions that you give to the software are called *commands*. In this message, the variable *file_name* represents the file that caused the error.

This book uses the following types of special text:

Note: Notes contain important information that you should consider.

Tip: Tips contain userful information that may improve product performance or that may make procedures easier to follow.

Warning! Warnings alert you to situations that could cause problems, such as loss of data, if you do not follow instructions carefully.

Chapter 1 Introducing MAINVIEW for WebSphere

MAINVIEW is a system management application that provides a wide range of services and functions to help you monitor and control mainframes. Built upon the BMC Software MAINVIEW architecture, MAINVIEW for WebSphere uses a window interface to provide access to all needed Web server data.

This chapter contains the following sections:

Features and Functions

MAINVIEW for WebSphere provides full-featured monitoring and management; site-use analysis; transaction process monitoring; and display of Web Server and Web Application Server (WAS) data. The Web Server and WAS parameters that are monitored include:

- Basic server information including name, IP address, type, uptime, version, status
- Bytes received, bytes sent
- Cache information including RAM in use, hits, bytes read, cached files
- Requests received, requests discarded, request errors by level, requests rejected
- Responses sent, responses discarded, number of responses by category
- System and application classpaths
- Web applications and servlets registered with the WAS
- Virtual host and servlets associated with each web application
- Servlet statistics including hit counts, elapsed times, classpath associations, and request activity by cookie

MAINVIEW Architecture

The BMC Software MAINVIEW family of products relies on a common communications framework that operates across multiple machines in multiple locations. This framework is called the MAINVIEW window interface, an easy-to-use extension of the standard ISPF interface.

MAINVIEW Address Spaces

All MAINVIEW products require three address spaces:

Coordinating address space (CAS): The CAS, which runs as a subsystem, provides many services to all MAINVIEW products. For example, the CAS is responsible for managing communication with other CASs on other local and remote systems, and for establishing direct communication between an individual user address space and a product address space. There is one CAS per OS/390 system image.

Product address space (PAS): A product address space houses special routines, including data collectors, to service one or more BBI-3 products. There are multiple PASs on an OS/390 system image. A single PAS can house multiple products. The separation into multiple PASs depends on product organization, load, and RAS requirements.

User address space (UAS): A user address space is a TSO session. The CAS enables direct communication between the PAS and the UAS. When the product address space initializes and connects to the CAS, the CAS adds information about the services and data provided by the PAS to its directory. The UAS might also be the MAINVIEW Browser interface, which connects first to the Browser Server and then to the CAS.

MAINVIEW Window Interface

Each MAINVIEW product uses the BMC Software MAINVIEW window interface, an easy-to-use extension of the standard ISPF interface. With the MAINVIEW window interface, you can use multiple products to control and monitor multiple resources on multiple systems, all on just one screen. During MAINVIEW sessions, you can use standard ISPF features, such a scrolling and screen swaps, to help navigate MAINVIEW menus and views.

You can display MAINVIEW for WebSphere views and manage the panels in which the views are displayed in the same way you do any MAINVIEW product. You can simultaneously display multiple panels of different sizes; and you can direct actions from one panel to another, all on one terminal.

Displayed Information

MAINVIEW for WebSphere displays the information it gathers in a view. A set of rows and columns presents data on a particular topic in tabular form. When a view is selected for display, a query is executed against the data collected by MAINVIEW for WebSphere to retrieve the relevant information. The data is formatted according to the associated set of instructions for the selected view.

With MAINVIEW for WebSphere, you can change a view's form without affecting its underlying query. The information you have requested is the same, but it is presented in a different format. For information on how to change the form, type **HELP FORM** on any MAINVIEW **COMMAND** line.

Understanding the MAINVIEW Window Interface

All MAINVIEW products use either the MAINVIEW window interface or the MAINVIEW standard ISPF panel interface. MAINVIEW for WebSphere uses both interfaces.

In the MAINVIEW window environment, each view is displayed in its own window. The top three lines of the MAINVIEW window interface are called the window control area. The control area consists of the Information Display line, which contains the current date and time, as well as the COMMAND line, the SCROLL field, the CURRent WINdow field, and the ALTernate WINdow field.

The row below the window control area is called the window information line and provides specific information about the view. This information includes the following:

- Number and status of the window
- Name of the view
- System, date, and time reflected by the view
- Name of the MAINVIEW product currently in use

Every window information line has the same fields, although some may not have values, depending on the view.

The window information line should look similar to this:

```
>W1 =STMDATA======SYSM======*====12FEB2001====16:53:58====MVWEB========20
```

The following table describes each element in the window information line.

>	Indicates that there is more data to the right of the screen. < indicates data to the left. + indicates data to the right and the left. A blank indicates all data fits in the current window.
W1	Is the number and status of the window. W1 means that window 1 is in Wait status. To see other possible statuses, place your cursor on W1 and press **PF1** for help.
STMDATA	Is the name of the view.
form_name (currently blank)	This field next to the view name appears when you use the FORM command to display the data in a different format.
SYSM	Indicates the current context. This can be the name of the current system or a predefined SSI context that can include certain targets.
*	Indicates the current scope. The scope allows you to narrow down a particular system within an SSI context. If you are not using an SSI context, this field contains an asterisk (*).
12FEB2001	Is the date that the data currently in the window was last updated.
16:53:58	Is the time that the data currently in the window was last updated.
duration (currently blank)	This field next to the time field appears when you use the duration parameter on the TIME command. This field tells you how many minutes of historical data are displayed.
MVWEB	Indicates the product identifier.
20	Indicates the number of rows available in the display. **Note:** For detail views (views that end in INFO), this number is always 1.

Everything below the window information line is called the display area.

View Categories

There are five kinds of views available in MAINVIEW products:

- Menu views

  Menu views allow you to hyperlink to other views. Some menus hyperlink to views that display information about your system; some menus hyperlink to more specific views or menus that allow you to focus on the information you need.

- Tabular views

  Tabular views are rows and columns of data. Each field in a given row addresses the same process, file system, or user ID. Most views are tabular.

- Detail views

  Detail views provide detailed information on a particular process, filesystem, or resource. Although detail views may resemble tabular views, the fields in a detail view are actually completely independent from one another.

- Summary views

  Summary views compress several rows of data into a single row based on certain criteria. All summary views are created from tabular views using a view customization option called GROUP BY. For more information, on the **COMMAND** line, type **HELP CUSTOM**, and then select the GROUP BY option.

- Detail summary views

  Detail summary views provide detailed information for a single resource, similar to detail views. However, the information may be summarized for one or more subresources and, possibly, multiple intervals.

MAINVIEW for WebSphere provides views that are divided into the following categories:

- **Web Server Information**, which provides information about software version, host name, IP address, port number, server roles, supported protocol, protocol version, and server support contact

- **Web Server Performance**, which provides information about uptime of server, server operational status, inbound and outbound connections, active threads, and maximum and minimum number of threads in thread pool

- **Web Server Requests**, which provides information about the total number of errors detected and discarded, number of GET requests, number of HEAD requests, number of POST requests, number of CGI requests, and number of HTTP Server API (GWAPI) requests

- **Web Server Responses**, which provides information about the total number of generated/received responses, total number of discarded responses, and number of Error responses

- **Web Server Cache**, which provides information about the number of bytes read, number of requests for stored files, number of bytes of RAM used by cache, and number of files in cache

- **Web Server Access**, which provides information about client IP address, client userid, access date and time, type of request, requested path, HTTP version, generated response code, and number of bytes sent

- **Web Application Server (WAS)**, which provides information about system and application classpaths, registered Web applications and servlets, virtual host and servlet associations, and servlet statistics

Customizing Views and Help Text to Meet Your Needs

One of the primary advantages of the MAINVIEW for WebSphere window interface is the ability to customize all views and help text to meet the particular needs of your installation.

Note: EZ Menus, such as EZWEB, cannot be customized.

View Customization: With the MAINVIEW view customization facility, you can organize your data in multiple ways. Some examples are listed below. You can:

- sort on multiple columns

- rearrange columns

- graph the data

- modify the view so that certain columns are completely hidden, thus displaying only the data you need

The view customization facility is entered by typing **CUSTom** on the **COMMAND** line.

Help Text Customization: To create your own help text, see the *MAINVIEW Administration Guide*. You can store this help text in your own private help text library or make it accessible to all MAINVIEW for WebSphere users at your site.

Getting Help on Views

MAINVIEW views are virtually self-documenting. That means no matter how you customize a view using the CUSTom command, the online help always draws from the most current information and is always accurate.

The different types of online help available are described in Table 1-1.

Table 1-1 Online Help Available for MAINVIEW Products

To display this	Do this
Help on a view	Place the cursor on the view name on the window information line and press **PF1**. Alternatively, on the **COMMAND** line, type **HELP** ***viewname***. View help displays other topics that tell you which parameters are currently in effect; which fields are included and excluded within the view; which fields have hyperlinks and to where; and so on.
Help on a field that appears on a view	Place the cursor on the field and press **PF1**.
Help on a field on the window information line	Place the cursor on the field and press **PF1**.
Help on a command or topic pertaining to the MAINVIEW window interface itself	On the **COMMAND** line, type **HELP** ***topic id***, where ***topic id*** is the ID of the topic as listed in the *MAINVIEW Command List*. (For example, typing **HELP ASU** gives you help on the ASU command.) Alternatively, place the cursor on the **COMMAND** line and press **PF1** to display the MAINVIEW help tutorial. Select either Beginning or Advanced topics, or type **INDEX** to display all the available topics.

Navigating through MAINVIEW for WebSphere

MAINVIEW for WebSphere displays the information it collects in the form of views - one view for each type of activity, area of interest, and timeframe.

There are three methods of displaying these views and the rest of the services provided by MAINVIEW for WebSphere:

- hyperlinks
- menus
- commands

Using Hyperlinks

A hyperlink is a way of connecting a field in a view to a field in another view, or a command. When you place your cursor on a field for which a hyperlink exists and press **Enter**, the underlying command is executed and its output is displayed.

Fields with hyperlink properties appear in a different color on your terminal. On monochrome terminals, hyperlinked fields appear in bold.

Every MAINVIEW window interface product allows you to develop your own hyperlinks. This will save time and steps when going from one view to another. For instructions on overriding the default hyperlinks and creating your own, type **HELP HYPERLINK** on the **COMMAND** line.

Using Easy Menus

An easy menu consists of a series of options that allows you to hyperlink to either data views or to other easy menus related to that particular option. All easy menus begin with the letters EZ. These menus allow you to locate specific information you are interested in without having to know the name of the view that contains the information. EZWEB is the easy menu for MAINVIEW for WebSphere.

Using Commands

To display a view using commands, type the view name or command on the **COMMAND** line. To see what MAINVIEW window interface commands are available, see the *MAINVIEW Command List*.

Displaying Multiple Views Simultaneously

While using commands to display views, it is possible to display multiple views at the same time. This is helpful when you are trying to diagnose a problem by comparing two views.

To display multiple views:

1. On the **COMMAND** line, type ***viewname***.

   For this command, ***viewname*** is the name of the view you want to display.

2. On the **COMMAND** line, type **HS** for horizontal split.

   Note: Do not press **Enter** yet.

3. Move the cursor about halfway down the current view to where you would like the top of the second view to appear.

4. Press **Enter**.

   MAINVIEW for WebSphere sets the **CURRENT WINDOW** field to 2.

5. On the **COMMAND** line, type the name of another view.

6. Press **Enter**.

   The two views now appear simultaneously.

Chapter 2 Getting Ready to Use MAINVIEW for WebSphere

This chapter provides the information you need for preparing, installing, and customizing MAINVIEW for WebSphere for operation in your environment. It also includes checklists that have tasks to help you successfully install and run the product.

This chapter contains the following sections:

Installing and Customizing MAINVIEW for WebSphere

MAINVIEW for WebSphere operates as a client in the BBI-SS PAS (BBI-3) and uses MAINVIEW services. Installation and customization of MAINVIEW for WebSphere require specific tasks before you can take advantage of MAINVIEW services and enable MAINVIEW for WebSphere.

MAINVIEW for WebSphere Requirements

The requirements that are listed in Table 2-1 include the operating system software needed for the installation and use of MAINVIEW for WebSphere.

MAINVIEW for WebSphere	Requirements
• BBI-3.3 PAS • MAINVIEW Product Group 3 • SMP/E-Packaged Product • CPO-Packaged Product	OS/390 2.6 or higher
	IBM HTTP Server 5.0 or higher
	SNMP must be enabled
	Logging must be enabled • Access Log • Error Log

Table 2-1 MAINVIEW for WebSphere Requirements

Note: You must start a Simple Network Management Protocol (SNMP) Agent that supports SNMP 1.0 before starting the HTTP Web server for MAINVIEW for WebSphere. If you do not start the SNMP Agent first, the HTTP Web server will not be able to register with the SNMP Agent. Therefore, some MAINVIEW for WebSphere performance information will not be properly displayed.

SNMP

Simple Network Management Protocol (SNMP) is the network management standard. It communicates management information with devices in a network. Network devices usually have an SNMP agent and one or more subagents. The SNMP agent communicates with the network management station or responds to command line SNMP requests. The SNMP subagent retrieves and updates data. The SNMP agent communicates back to requesters using the data that the SNMP subagent sends.

The IBM TCPIP stack includes the SNMP daemon. The TCPIP.SEZAINST library contains the sample proc OSNMPDPR. You must configure a TCPIP.PW.SRC file that contains the community name and the network masks that use the name.

The following is a sample of the OSNMPD proc:

```
//OSNMPD   PROC
//OSNMPD EXEC PGM=EZASNMPD,REGION=4096K,TIME=NOLIMIT,
// PARM='POSIX(ON) ALL31(ON)/'
//STEPLIB  DD  DISP=SHR,DSN=TCPIP.SEZALINK
//SYSPRINT DD SYSOUT=*,DCB=(RECFM=F,LRECL=80,BLKSIZE=80)
//SYSIN    DD DUMMY
//SYSMDUMP DD SYSOUT=*
//SYSERR   DD SYSOUT=*
//SYSOUT  DD SYSOUT=*,DCB=(RECFM=F,LRECL=80,BLKSIZE=80)
//CEEDUMP  DD SYSOUT=*
```

The following is a sample of the TCPIP.PW.SRC file:

```
public 0.0.0.0 0.0.0.0
```

In order for MAINVIEW for WebSphere to gather SNMP data, the SNMP daemon must start before the HTTP server.

Once the daemon and HTTP server are up, you can run the following batch job to ensure that the agent and subagent are communicating:

```
//  ---  JOB  ---  Valid jobcard here
//TMP1  EXEC  PGM=IKJEFT01,REGION=32M,
//            DYNAMNBR=200
//*
//SYSPROC  DD  DSN=SYS1.SBPXEXEC,DISP=SHR
//*
//SYSTSPRT DD  SYSOUT=*
//SYSTSIN  DD  *
 oshell osnmp get 1.3.6.1.4.1.2.6.120.1.1.1.1.1.8.1
//*
```

The following is a sample of the verification job output:

```
1.3.6.1.4.1.2.6.120.1.1.1.1.1.8.1 = 80  (where 80 is the
port of the HTTP server)
```

For more information about the customization and implementation of the IBM SNMP agent, see *OS/390 SecureWay Communications Server: IP Configuration* (document number SC31-8513-03).

Installing MAINVIEW for WebSphere

For procedures about acquiring and installing MAINVIEW for WebSphere from the BMC Software Enterprise Server Installation System, see the *Installation and Maintenance Guide for Enterprise Servers.* Target and distribution libraries are in the base MAINVIEW installation. You may also receive cumulative and candidate maintenance tapes with applicable PTFs.

For information about software and storage requirements, product and FMIDS, refer to the *MAINVIEW Installation Requirements Guide* and the *MAINVIEW for WebSphere Release Notes*.

MAINVIEW AutoCustomization performs many install steps, providing panels on which you can enter required information. You may also have to perform steps to ensure the level of security that is required at your site.

If you want to perform the customization steps manually, see the *MAINVIEW Common Customization Guide* for procedures.

Installation Checklists

The checklists in this section are a road map that lists the steps that you must perform to install and run MAINVIEW for WebSphere. These checklists provide a summary of the steps that you must perform and where to find detailed instructions if you need them.

Preparation Checklist

The preparation checklist helps you prepare for installation of your products. It lists the tasks that you must complete and the items that you must assemble before you start installation.

	Step	Task	Description	Reference
	1	assemble needed materials	Gather all installation tapes, tape cover letters, product release notes, product technical bulletins, *installation guides*, customization guides, planning guides, and so on.	Documentation in your shipment
	2	review tape cover letters	The tape cover letters are shipped with your tapes. They describe what materials you should have.	tape cover letters (one per tape) in your shipment
	3	review product release notes, technical bulletins, and flashes	The release notes indicate what is new or changed for a product and contain important information you need to know. Technical bulletins and flashes contain information about product fixes since the product was last released.	Product release notes (one per product) and product technical bulletins and flashes (none to many per product) in your shipment
	4	obtain product passwords	Contact BMC Software to obtain the passwords for your products.	*MAINVIEW for WebSphere*, "BMC Software Product Authorization" appendix
	5	read prerequisites	The prerequisites list information such as operating system version, space requirements, and authorization requirements.	prerequisite section in the *MAINVIEW for WebSphere Reference Manual*
	6	read migration and installation considerations	Migration considerations describe what you must do to migrate from a previous version of the product or from another product. Installation considerations describe information about running with other products and product implementation.	installation considerations section in the *MAINVIEW for WebSphere Reference Manual*

	Step	Task	Description	Reference
	7	obtain system authorization to complete installation and customization	Many systems require APF authorization, RACF security permissions, and other system authorization to install products.	your system administrator, security administrator, or other administrator
	8	complete planning, testing, and setup	This information is needed for a successful installation.	checklists in the *MAINVIEW for WebSphere Reference Manual*

Installation/Customization Checklist

The items in the installation/customization checklist help you to install, implement, and test MAINVIEW for WebSphere.

	Step	Task	Description	Reference
	1	install MAINVIEW for WebSphere using the SMP/E method.	SMP/E performs the actions of IEBCOPY, and also implements a change management environment.	*Product Installation and Maintenance Guide (CPO and SMP/E)*
	2	perform the customization process	The customization process allows you to specify options suitable to your system environment.	*MAINVIEW Implementation Guide*
	3	define security attributes for the started tasks	The started task for MAINVIEW for WebSphere should be assigned the same permission as that of the Web Server. Assign a userID to MAINVIEW for WebSphere that has the same OMVS segment authority as the Web Server.	*MAINVIEW for WebSphere Reference Manual*, "Troubleshooting Tips" appendix
	4	verify port set ups of input parameter SNMP and SNMP agent	The input parameter SNMP port should be set to the same port as the SNMP agent.	*MAINVIEW for WebSphere Reference Manual*, "Troubleshooting Tips" appendix
	5	perform the Synthetic Transaction Monitor (STM) setup	The SYSUT2 DD data set in MVCPY must be the same data set specified in the MAINVIEW for WebSphere PAS STMDATA DD card. Run the MVCPY job on the system that is to run MAINVIEW for WebSphere.	*Synthetic Transaction Monitor Getting Started Guide*
	6	start the SNMP agent	The SNMP agent serves as the communicator between the network management station and requesters as well as SNMP subagents.	
	7	start the Web Server	The httpd.conf file requires verification of the following: 1) SNMP is ON; 2) LOGGING is ON; and 3) SNMP Community is Public.	

	Step	Task	Description	Reference
	8	run the SNMP verification test	The verification test ensures communication between the agent and subagent. **Note:** To run the SNMP verification test, use the system that is running your HTTP Server and SNMP Daemon. From ISPF Option 6, perform the following steps: **8.A** Type **OMVS** (to access the OMVS Shell). **8.B** At the prompt, type the following: osnmp get 1.3.6.1.4.1.2.6.120.1.1.1.1.1.8.1 **Note:** This command should return the port number that the HTTP Server is listening on. The number is typically 80. **8.C** Type **exit** to end the OMVS Shell session.	*MAINVIEW for WebSphere Reference Manual*, "SNMP" section in Chapter 2.
	9	check on success or failure of verification step	If the verification step fails, send the dump, the Web Server vv trace, and the output from the NETSTAT CONN command to BMC Software Product Support for problem determination. Perform the NETSTAT CONN command for every stack on the system. After the problem is resolved, repeat steps 6 through 8 in this checklist. When the verification step is successful, proceed to the next step.	*MAINVIEW for WebSphere Reference Manual*, "Troubleshooting Tips" appendix
	10	start the Common Address Space (CAS)	The CAS is responsible for managing communication with other CASs on other local and remote systems, and for establishing direct communication between an individual user address space and a product address space. There is one CAS per s/390 system image.	*MAINVIEW Implementation Guide*

	Step	Task	Description	Reference
	11	start the Product Address Space (PAS)	A PAS houses special routines, including data collectors, to service one or more BBI-3 products. There are multiple PASs on an s/390 system image. A single PAS can house multiple products. The separation into multiple PASs depends on product organization, load, and RAS requirements.	*MAINVIEW Implementation Guide*
	12	wait to start the MAINVIEW for WebSphere monitor	Before using the MAINVIEW for WebSphere monitor, wait 10 minutes for the system to gather data.	

Where To Go From Here

When installation of your product is complete, refer to the following books:

Product	Document
prepare MAINVIEW environment	*MAINVIEW Implementation Guide*
maintain MAINVIEW environment	*MAINVIEW Administration Guide*
customize product	*MAINVIEW for WebSphere Reference Manual* *MAINVIEW Implementation Guide*
learn how to use MAINVIEW products	*Quick Start with MAINVIEW* *Using MAINVIEW*
learn about product features and functions and how to use the product	*MAINVIEW for WebSphere Reference Manual*

Chapter 3 Logging On to MAINVIEW for WebSphere

This chapter shows you how to log on to MAINVIEW for WebSphere and how to exit from the product.

This chapter contains the following sections:

Accessing MAINVIEW for WebSphere

You must use the MAINVIEW Selection Menu to access MAINVIEW for WebSphere.

1. Display the MAINVIEW Selection Menu panel by performing the following steps:

   - If your ISPF main panel contains an option for MAINVIEW product, select that option, or

   - Issue TSO MAINVIEW from any ISPF panel. (MAINVIEW is a CLIST that you or your product administrator must create during AutoCustomization.)

The MainView Selection Menu panel is displayed (Figure 3-1).

```
--------------------------- MainView Selection Menu -------------- ENTER OPTION
OPTION  ===>                                                      DATE   -- 01/03/08
                                                                   TIME   -- 08:48:38
   0  Parameters    Specify MainView options                      USERID -- RCHJXW2
   1  PLEXMGR       MainView Plex administration                  MODE   -- ISPF 5.0
   2  FOCAL POINT   Subsystem monitoring and alerts
   3  AutoOPERATOR  Automation and resource control
   A  MVALARM       MainView Alarm management
   T  InTune        Program analysis and tuning
   V  VistaPoint    Comprehensive view of applications and resources

 MainView for
   4  CICS          CICS performance and control
   5  DB2           DB2  performance and control
   6  IMS           IMS  performance and control
   7  MVS           OS/390 (MVS) performance and control
   8  MQSeries      MQSeries performance and control
   9  USS           UNIX System Services performance and control
  10  VTAM          VTAM Network performance and optimization
  11  TCP/IP        TCP/IP performance
  12  WEBSPHERE     WEBSPHERE performance
   X  EXIT          Terminate MainView
 F1=HELP      F2=SPLIT     F3=END       F4=PRINT     F5=LOG       F6=GO
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 3-1 MainView Selection Menu

1. Select Option 12 (**WEBSPHERE** - **WEBSPHERE performance**).

2. Press **Enter**. The Session Control Parameters panel is displayed (Figure 3-2 on page 3-3).

Figure 3-2 Session Control Parameters Panel

```
 BMC SOFTWARE ----------- SESSION CONTROL PARAMETERS --------------------------
COMMAND ===>

Subsystem ID    ===> BBWB   (Coordinating Address Space subsystem ID)

XDM mode        ===> NO     (Execute session in diagnostic mode, Yes/No)


Press ENTER to confirm use of session parameters entered above.









 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

3. Verify that the Subsystem ID field contains the coordinating address space (CAS) identifier, and then press **Enter**.

   If no default value is present, if you do not know the CAS identifier, or if the default value results in an error message, see your MAINVIEW for WebSphere product administrator.

   When you see the message `Connecting...` in the upper right-hand corner of the panel, you are in the process of accessing MAINVIEW for WebSphere.

4. Press **Enter**. The EZWEB Menu is displayed (Figure 3-3 on page 3-4).

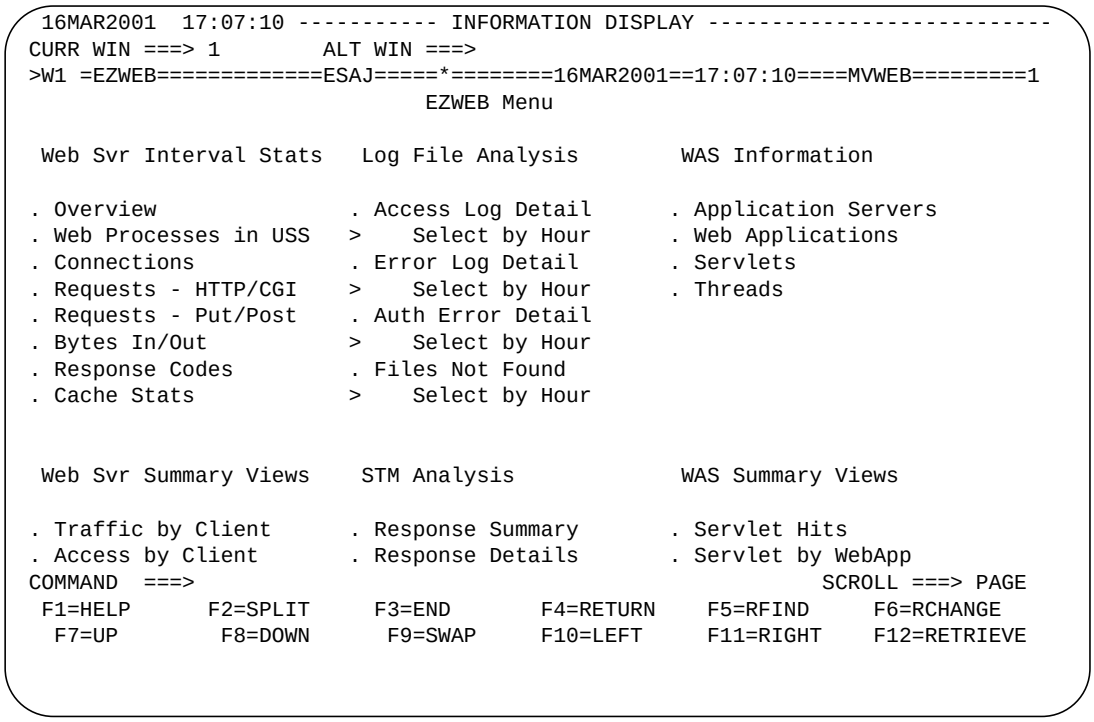


Figure 3-3 EZWEB Menu

Easy Menu

The MAINVIEW for WebSphere easy menu (EZWEB) allows navigation to the various parts of MAINVIEW for WebSphere based on a feature you want to monitor rather than on a specific view. The selections on this menu allow you to access information quickly.

To display a list of all MAINVIEW for WebSphere views, choose Select View (Tools and Menus) on the EZWEB Menu.

For more information on the MAINVIEW for WebSphere easy menu and views you can select from it, refer to Chapter 4, “Using MAINVIEW for WebSphere.”

Exiting from MAINVIEW for WebSphere

When you are finished working with MAINVIEW for WebSphere, you can return to the MainView Selections Menu by issuing either of the following commands from the command list:

- Quit
- RETURN

Chapter 4 Using MAINVIEW for WebSphere

This chapter provides information to help you interpret the view information that is provided with MAINVIEW for WebSphere.

This chapter contains the following sections:

Overview

The MAINVIEW windows mode technology provides views that summarize data pulled from multiple subsystems. MAINVIEW for WebSphere provides full-featured monitoring and management; site-use analysis; transaction process monitoring; and display of Web server data without the SNMP management console.

Within MAINVIEW for WebSphere, you can display detailed and summary views of collected data. To display a list of all MAINVIEW for WebSphere views, select Select View (Tools and Menus) on the EZWEB Menu.

Note: The online help contains information for the MAINVIEW for WebSphere views and the fields in them. To access the online help, position the cursor on the applicable field, and press the Help key (usually PF1).

MAINVIEW for WebSphere EZ Menu

The MAINVIEW for WebSphere EZ Menu (EZWEB) provides access to Web Server information, including summary views of collected information. You can view web server parameters on the MAINVIEW monitor.

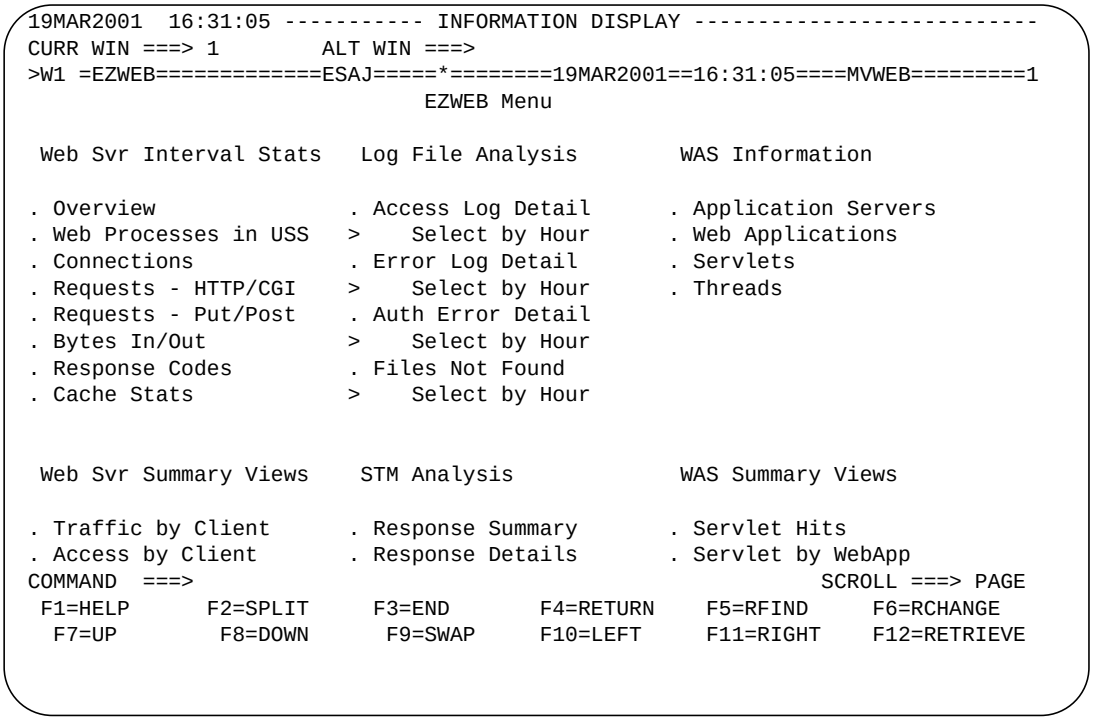


Figure 4-1 EZWEB Menu

Web Server Information View

The Web Server Information (SERVOVER) view provides information about software version, host name, IP address, port number and server roles. It also displays information on server version and name, and the contact person for server problems and questions.

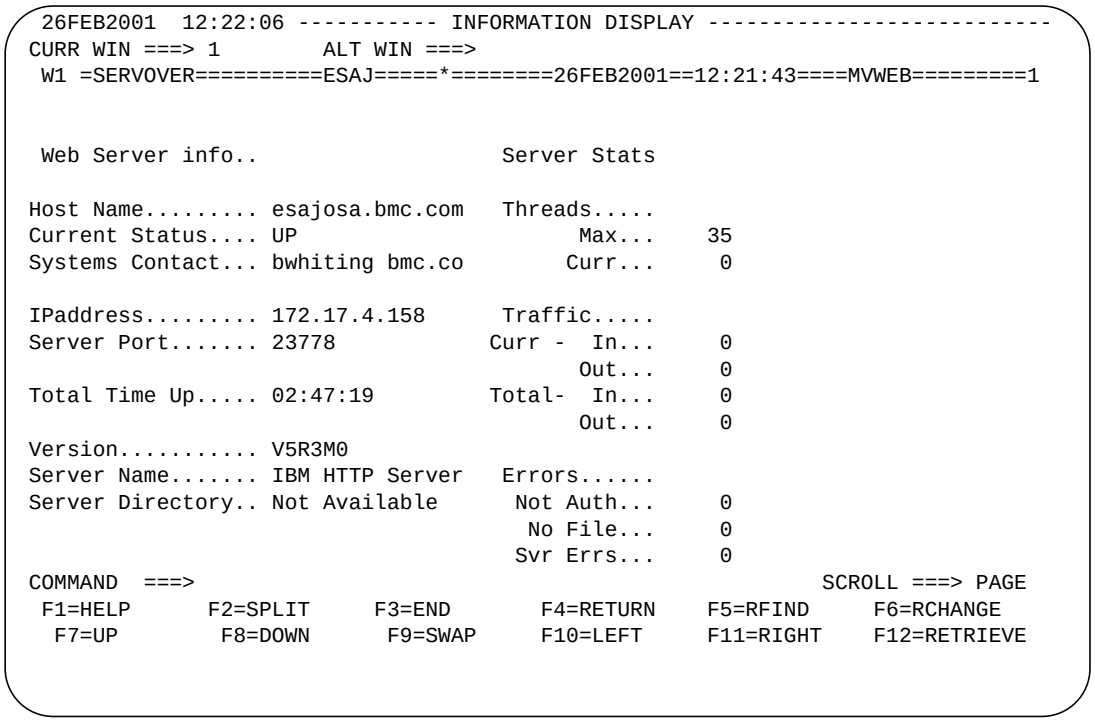


Figure 4-2 Web Server Information View

Field	Description
Host Name	Indicates the name of the host server
Current Status	Indicates whether the server is currently active
Systems Contact	Indicates the person to contact about server problems or questions
IPaddress	Indicates the host IP address that the server runs on
Server Port	Indicates the port number accessed by the server

Table 4-1 View Fields - Web Server Information

Field	Description
Total Time Up	Indicates the time period during which the server was active Format - HH:MM:SS
Version	Indicates the version of the supported protocol
Server Name	Indicates the name of the functional unit that provides services to one or more clients over a network
Server Directory	Indicates the name of the server directory
Max - Threads	Indicates the maximum number of threads a server can have in the thread pool
Curr - Threads	Indicates the number of active threads on the server
Curr - Inbound Traffic	Indicates the number of inbound connections currently running on the server
Curr - Outbound Traffic	Indicates the number of outbound connections currently running on the server
Total - Inbound Traffic	Indicates the total number of inbound connections
Total - Outbound Traffic	Indicates the total number of outbound connections
Errors - Not Authorized	Indicates the number of Unauthorized errors issued by the server
Errors - No File	Indicates the number of File Not Found errors issued by the server
Errors - Server Errors	Indicates the number of Internal Server errors issued by the server
Note: There is more data on the next panel.	
Last STM	Indicates the number of transactions reported by the Synthetic Transaction Monitor (STM)
Requests - Gets	Indicates the number of GET requests received by the server

Table 4-1 View Fields - Web Server Information

Field	Description
Requests - Posts	Indicates the number of POST requests received by the server
Requests - Total	Indicates the total number of requests generated or received by the server

Table 4-1 View Fields - Web Server Information

Web Server Connections View

The Web Server Connections (CONNECTS) view provides statistics on the number of inbound and outbound connections, and active threads.

```
 26FEB2001  12:26:48 ----------- INFORMATION DISPLAY ---------------------------
CURR WIN ===> 1        ALT WIN ===>
 W1 =CONNECTS==========ESAJ=====*========26FEB2001==12:26:47====MVWEB========15
Server           Interval Active   Inbnd  Connections    Outbnd Connections
Name             Time     Threads  ------ 0.....25....50 ------ 0.....25....50
esajosa.bmc.com  12:26:24        0      0                      0
esajosa.bmc.com  12:26:23        0      0                      0
esajosa.bmc.com  12:16:31        0      0                      0
esajosa.bmc.com  12:11:29        0      0                      0
esajosa.bmc.com  12:06:27        0      0                      0
esajosa.bmc.com  12:00:51        0      0                      0
esajosa.bmc.com  11:55:49        0      0                      0
esajosa.bmc.com  11:50:47        0      0                      0
esajosa.bmc.com  11:45:46        0      0                      0
esajosa.bmc.com  11:40:44        0      0                      0
esajosa.bmc.com  11:35:42        0      0                      0
esajosa.bmc.com  11:30:40        0      0                      0
esajosa.bmc.com  11:25:38        0      0                      0
esajosa.bmc.com  11:20:36        0      0                      0
esajosa.bmc.com  11:15:33        0      0                      0

COMMAND  ===>                                                SCROLL ===> PAGE
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-3 Web Server Connections View

Field	Description
Server Name	Indicates the name of the functional unit that provides services to one or more clients over a network
Interval Time	Indicates the specific time during which web server data was collected Format - HH:MM:SS
Active Threads	Indicates the number of active threads on the server

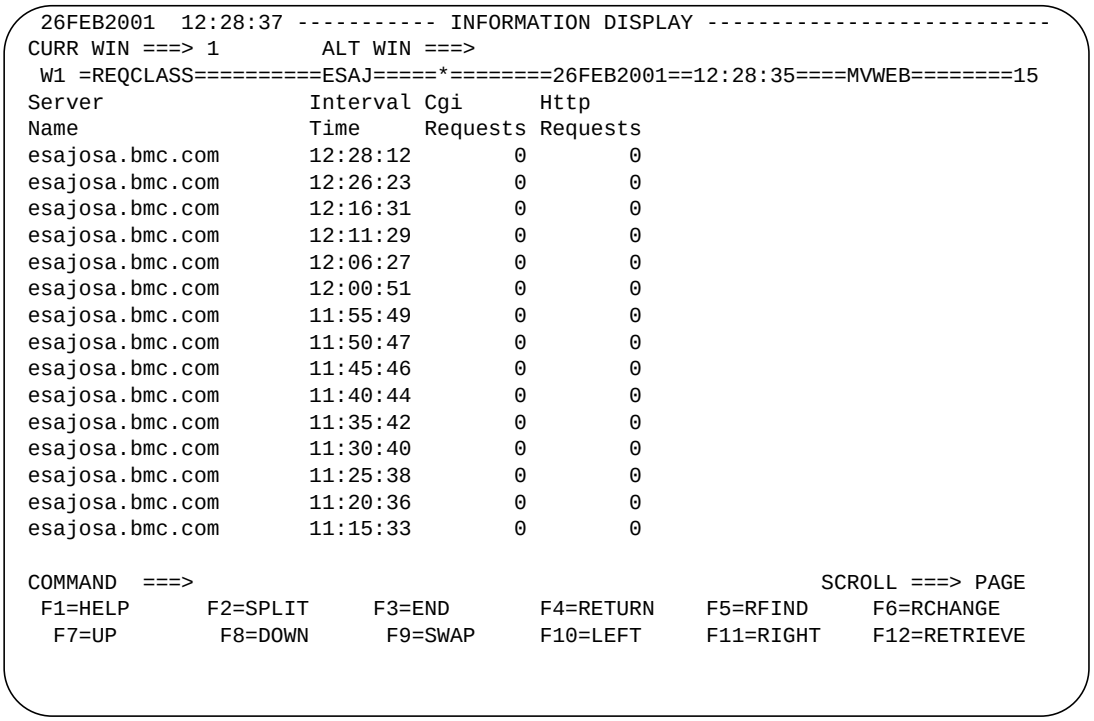
Table 4-2 View Fields - Web Server Connections

Field	Description
Inbnd Connections	Indicates the number of inbound connections currently running on server
Outbnd Connections	Indicates the number of outbound connections currently running on server

Table 4-2 View Fields - Web Server Connections

Web Server Requests - HTTP/CGI View

The Web Server Requests - HTTP/CGI (REQCLASS) view provides information on the number of CGI and HTTP requests received from the server.



```
 26FEB2001  12:28:37 ----------- INFORMATION DISPLAY --------------------------
CURR WIN ===> 1        ALT WIN ===>
 W1 =REQCLASS==========ESAJ=====*========26FEB2001==12:28:35====MVWEB========15
Server                Interval Cgi      Http
Name                  Time     Requests Requests
esajosa.bmc.com       12:28:12        0        0
esajosa.bmc.com       12:26:23        0        0
esajosa.bmc.com       12:16:31        0        0
esajosa.bmc.com       12:11:29        0        0
esajosa.bmc.com       12:06:27        0        0
esajosa.bmc.com       12:00:51        0        0
esajosa.bmc.com       11:55:49        0        0
esajosa.bmc.com       11:50:47        0        0
esajosa.bmc.com       11:45:46        0        0
esajosa.bmc.com       11:40:44        0        0
esajosa.bmc.com       11:35:42        0        0
esajosa.bmc.com       11:30:40        0        0
esajosa.bmc.com       11:25:38        0        0
esajosa.bmc.com       11:20:36        0        0
esajosa.bmc.com       11:15:33        0        0

COMMAND  ===>                                          SCROLL ===> PAGE
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-4 Web Server Requests - HTTP/CGI View

Field	Description
Server Name	Indicates the name of the functional unit that provides services to one or more clients over a network
Interval Time	Indicates the specific time during which web server data was collected Format - HH:MM:SS
Cgi Requests	Indicates the number of CGI requests received by the server
Http Requests	Indicates the number of HTTP requests received by the server

Table 4-3 View Fields - Web Server Requests - HTTP/CGI

Web Server Requests - Put/Post View

The Web Server Requests - Put/Post (REQTYPE) view provides information on the total number of generated/received responses.

```
 26FEB2001  12:29:47 ----------- INFORMATION DISPLAY --------------------------
CURR WIN ===> 1        ALT WIN ===>
 W1 =REQTYPE==========ESAJ=====*========26FEB2001==12:29:45====MVWEB========15
Server                Interval Get      Post     Head             Total
Name                  End Time Requests Requests Requests       Requests
esajosa.bmc.com       12:29:22        0        0        0              0
esajosa.bmc.com       12:26:23        0        0        0              0
esajosa.bmc.com       12:16:31        0        0        0              0
esajosa.bmc.com       12:11:29        0        0        0              0
esajosa.bmc.com       12:06:27        0        0        0              0
esajosa.bmc.com       12:00:51        0        0        0              0
esajosa.bmc.com       11:55:49        0        0        0              0
esajosa.bmc.com       11:50:47        0        0        0              0
esajosa.bmc.com       11:45:46        0        0        0              0
esajosa.bmc.com       11:40:44        0        0        0              0
esajosa.bmc.com       11:35:42        0        0        0              0
esajosa.bmc.com       11:30:40        0        0        0              0
esajosa.bmc.com       11:25:38        0        0        0              0
esajosa.bmc.com       11:20:36        0        0        0              0
esajosa.bmc.com       11:15:33        0        0        0              0

COMMAND  ===>                                                SCROLL ===> PAGE
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-5 Web Server Requests - Put/Post View

Field	Description
Server Name	Indicates the name of the functional unit that provides services to one or more clients over a network
Interval End Time	Indicates the specific time during which the collection web server ended Format - HH:MM:SS
Get Requests	Indicates the number of GET requests received by the server
Post Requests	Indicates the number of POST requests received by the server

Table 4-4 View Fields - Web Server Requests - Put/Post

Field	Description
Head Requests	Indicates the number of HEAD requests received by the server
Total Requests	Indicates the total number of requests generated or received by the server

Table 4-4 View Fields - Web Server Requests - Put/Post

Web Server Bytes In/Out View

The Web Server Bytes In/Out (TRAFFIC) view provides statistics on the number of inbound and outbound bytes.

```
 26FEB2001  14:45:51 ----------- INFORMATION DISPLAY --------------------------
CURR WIN ===> 1        ALT WIN ===>
 W1 =TRAFFIC==========ESAJ=====*========26FEB2001==14:45:47====MVWEB=========3
Server               Interval Interval Interval      Summary   Summary
Name                 Time     InBytes  OutBytes     In Bytes Out Bytes
esajosa.bmc.com      14:45:24        0        0            0         0
esajosa.bmc.com      14:39:41        0        0            0         0
esajosa.bmc.com      14:34:39        0        0            0         0









COMMAND  ===>                                                SCROLL ===> PAGE
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-6 Web Server Bytes In/Out View

Field	Description
Server Name	Indicates the name of the functional unit that provides services to one or more clients over a network
Interval Time	Indicates the specific time during which web server data was collected Format - HH:MM:SS
Interval InBytes	Indicates the number of inbound bytes to the server for a specified interval
Interval OutBytes	Indicates the number of outbound bytes from the server for a specified interval

Table 4-5 View Fields - Web Server Bytes In/Out

Field	Description
Summary In Bytes	Indicates the total number of bytes inbound from the server
Summary Out Bytes	Indicates the total number of bytes outbound from the server

Table 4-5 View Fields - Web Server Bytes In/Out

Web Server Response Codes View

The Web Server Response Codes (RESPONSE) view provides information on the total number of generated/received responses and total number of discarded responses.

```
 26FEB2001  17:35:22 ----------- INFORMATION DISPLAY --------------------------
CURR WIN ===> 1        ALT WIN ===>
 W1 =RESPONSE==========ESAJ=====*========26FEB2001==17:35:19====MVWEB========11
Server             Interval    Req   Move    Not    Req   File  Proxy Server
Name               Time       OK'd   Temp   Auth Forbid    N/F N/Auth Errors
esajosa.bmc.com    17:34:56     10      0      0      0      0      0      0
esajosa.bmc.com    17:30:47     10      0      0      0      0      0      0
esajosa.bmc.com    17:25:45     10      0      0      0      0      0      0
esajosa.bmc.com    17:20:43      7      0      0      0      0      0      0
esajosa.bmc.com    17:15:41      6      0      0      0      0      0      0
esajosa.bmc.com    17:10:39      6      0      0      0      0      0      0
esajosa.bmc.com    17:05:37      5      0      0      0      0      0      0
esajosa.bmc.com    17:00:36      2      0      0      0      0      0      0
esajosa.bmc.com    16:55:34      2      0      0      0      0      0      0
esajosa.bmc.com    16:50:32      1      0      0      0      0      0      0
esajosa.bmc.com    16:45:30    492      0     55      0      0      0      0




COMMAND  ===>                                                SCROLL ===> PAGE
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-7 Web Server Response Codes View

Field	Description
Server Name	Indicates the name of the functional unit that provides services to one or more clients over a network
Interval Time	Indicates the specific time during which web server data was collected Format - HH:MM:SS
Req OK'd	Indicates the number of (Positive Completion) responses generated by the server

Table 4-6 View Fields - Web Server Response Codes View

Field	Description
Move Temp	Indicates the number of (Positive Intermediate Completion) reponses generated by the server
Not Auth	Indicates the number of (Unauthorized) responses generated by the server
Req Forbid	Indicates the number of (Forbidden) responses generated by the server
File N/F	Indicates the number of (Files Not Found) responses generated by the server
Proxy N/Auth	Indicates the number of (Proxy Unauthorized) responses generated by the server
Server Errors	Indicates the number of (Internal Server) responses generated by the server

Table 4-6 View Fields - Web Server Response Codes View

Web Server Cache Stats View

The Web Server Cache Stats View (CACHE) view provides information about the number of bytes read, number of bytes of RAM, and number of files in cache. It also provides the number of requests for stored files.

```
 26FEB2001  17:36:58 ----------- INFORMATION DISPLAY --------------------------
CURR WIN ===> 1        ALT WIN ===>
>W1 =CACHE=============ESAJ=====*========26FEB2001==17:36:55====MVWEB========11
Server               Cached      Cached      Cached      Cached      Interval
Name                 File Hits   Files       Bytes Read  RAM Bytes   Time
esajosa.bmc.com                0           0           0        2690 17:36:32
esajosa.bmc.com                0           0           0        2690 17:30:47
esajosa.bmc.com                0           0           0        2690 17:25:45
esajosa.bmc.com                0           0           0        2690 17:20:43
esajosa.bmc.com                0           0           0        2690 17:15:41
esajosa.bmc.com                0           0           0        2690 17:10:39
esajosa.bmc.com                0           0           0        2690 17:05:37
esajosa.bmc.com                0           0           0        2690 17:00:36
esajosa.bmc.com                0           0           0        2690 16:55:34
esajosa.bmc.com                0           0           0        2690 16:50:32
esajosa.bmc.com                0           0           0       13450 16:45:30




COMMAND  ===>                                                SCROLL ===> PAGE
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-8 Web Server Cache Stats View

Field	Description
Server Name	Indicates the name of the functional unit that provides services to one or more clients over a network
Cached File Hits	Indicates the number of requests for files stored in server cache
Cached Files	Indicates the number of files in server cache
Cached Bytes Read	Indicates the number of bytes read from the server cache
Cached RAM Bytes	Indicates the number of RAM bytes used by the server cache

Table 4-7 View Fields - Web Server Cache Stats

Field	Description
Interval Time	Indicates the specific time during which web server data was collected Format - HH:MM:SS
Note: The > symbol in the window information line indicates there is more data to the right of the panel.	
Interval Date	Indicates the specific date on which web server data was collected Format - MM/DD/YYYY
Real Time	Indicates whether the time data is real time • Y - Yes • N - No

Table 4-7 View Fields - Web Server Cache Stats

Access Log Detail View

The Access Log Detail (ACCESS) view provides information about client IP address, client userid, access date and time, and file accessed. It also provides information on the method of access.

```
26FEB2001 13:24:32 ----------- INFORMATION DISPLAY --------------------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ACCESS===========SYSM=====*========26FEB2001==13:24:32====MVWEB=======182
 Access   Client           Access     Bytes    File
 Time     IP_address       Date       Sent     Accessed
 13:15:15 172.024.136.231  06/03/2000      212 mvstmcgi
 13:15:14 172.024.136.231  06/03/2000      277 TemplateResourceBundle.class
 13:15:13 172.024.136.231  06/03/2000      277 TemplateResourceBundle_en_US.cla
 13:15:13 172.024.136.231  06/03/2000      277 htlogapp.jar
 13:15:13 172.024.136.231  06/03/2000      277 TemplateResourceBundle_en_US.pro
 13:15:12 172.024.136.231  06/03/2000      212 mvstmcgi
 13:14:53 172.024.136.231  06/03/2000      277 reports.html
 13:14:53 172.024.136.231  06/03/2000      277 Initial
 13:14:52 172.024.136.231  06/03/2000      277 cfg_intro
 13:14:52 172.024.136.231  06/03/2000      129 transhelpmenu.gif
 13:14:52 172.024.136.231  06/03/2000      277 cfgclient.NLS
 13:14:52 172.024.136.231  06/03/2000      118 restart.gif
 13:14:52 172.024.136.231  06/03/2000    28369 httpdiamond.gif
 13:14:52 172.024.136.231  06/03/2000      136 ibmlogo.gif
 13:14:51 172.024.136.231  06/03/2000      277 cfgclient.props
 13:14:51 172.024.136.231  06/03/2000      277 ready.gif
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
 F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-9 Access Log Detail View

Field	Description
Access Time	Indicates the time of access Format - HH:MM:SS
Client IP_address	Indicates the IP address of the accessing client
Access Date	Indicates the date of access by the client Format - MM/DD/YYYY
Bytes Sent	Indicates the number of bytes sent
File Accessed	Indicates the name of the file accessed by the client

Table 4-8 View Fields - Access Log Detail

Field	Description
Note: The > symbol in the window information line indicates there is more data to the right of the panel.	
Access Method	Indicates type of access request. Access types: • GET • HEAD • POST • PUT
Host Name	Indicates the name of the host server accessed by the client
File Path	Indicates the directory path of the file being accessed by the client

Table 4-8 View Fields - Access Log Detail

Error Log Detail View

The Error Log Detail view provides information about client IP address, client userid, file name, and file path. It also provides message information on the type of error generated.

```
26FEB2001 13:28:38 ----------- INFORMATION DISPLAY --------------------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ERRORS===========SYSM=====*========26FEB2001==13:28:38====MVWEB=======132
 Error    Client           Error      File
 Time     IP_address       Date       Name
 13:25:01 172.024.136.231  06/03/2000 reports.html
 13:25:01 172.024.136.231  06/03/2000 restart.gif
 13:25:01 172.024.136.231  06/03/2000 Initial
 13:25:00 172.024.136.231  06/03/2000 kinfoque.gif
 13:25:00 172.024.136.231  06/03/2000 cfgclient.props
 13:25:00 172.024.136.231  06/03/2000 ready.gif
 13:25:00 172.024.136.231  06/03/2000 cfgclient.NLS
 13:25:00 172.024.136.231  06/03/2000 cfg_intro
 13:24:58 172.024.136.231  06/03/2000 webExec.cab
 13:24:58 172.024.136.231  06/03/2000 cfg_top.html
 13:24:58 172.024.136.231  06/03/2000 cfg_navarea.html
 13:24:57 172.024.136.231  06/03/2000 cfginit.html
 13:24:56 172.024.136.231  06/03/2000 webExec.cab
 13:24:55 172.024.136.231  06/03/2000 loadingmessage.html
 13:24:55 172.024.136.231  06/03/2000 cfgstart.html
 13:24:55 172.024.136.231  06/03/2000 loadjava.html
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
 F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-10 Error Log Detail View

Field	Description
Error Time	Indicates the time during which an error was detected by the server Format - HH:MM:SS
Client IP_address	Indicates the IP address of the accessing client
Error Date	Indicates the date on which an error was detected by the server Format - MM/DD/YYYY
File Name	Indicates the name of the file accessed by the client
Note: The > symbol in the window information line indicates there is more data to the right of the panel.	

Table 4-9 View Fields - Error Log Detail

Field	Description
ShortMSG Text	Indicates the message number and brief explanation of the transmitted message
Message Type	Indicates the type of message transmitted via the server. Message Types • Informational • Error • Warning
Client Userid	Indicates the user ID of the client accessing the server
Host Name	Indicates the name of the host server accessed by the client
File Path	Indicates the directory path of the file being accessed by the client
File Extension	Indicates the extension of the file being accessed by the client
Filesys Name	Indicates the filesys name of the accessed file
LongMsg Test	Provides more detail about the short message text

Table 4-9 View Fields - Error Log Detail

Application Servers View

The Application Servers view (APPSERV) provides information about the application servers monitored by the MAINVIEW for WebSphere product. Information includes server name, server version, jobname and address space identifier of the HTTP server.

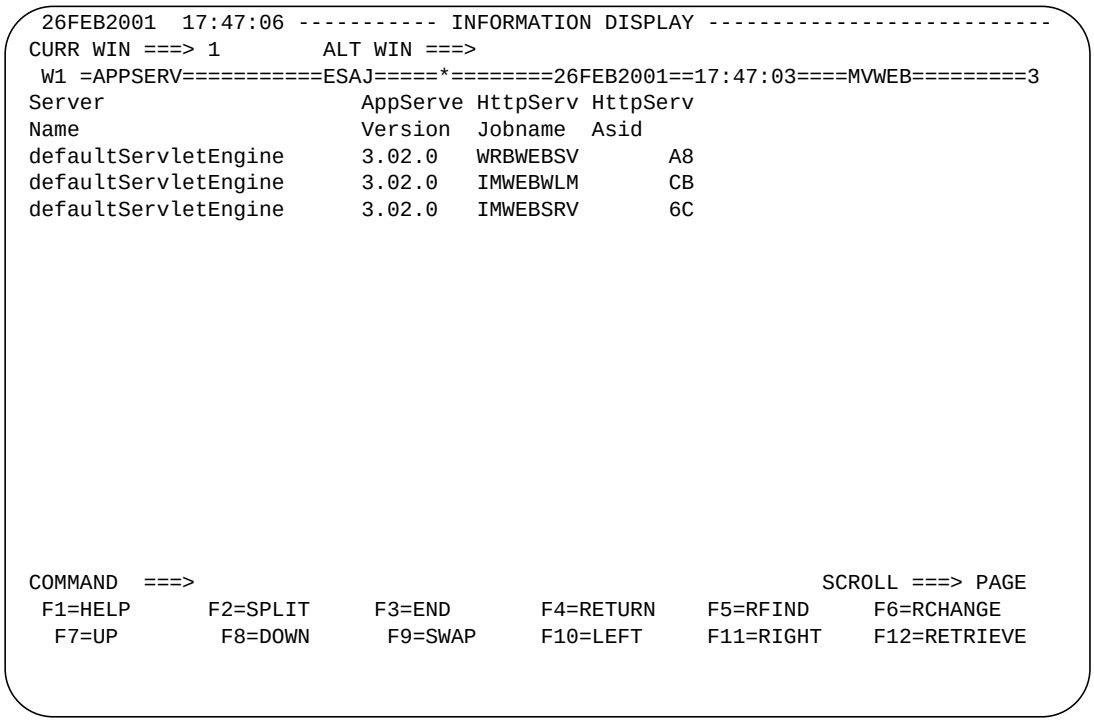


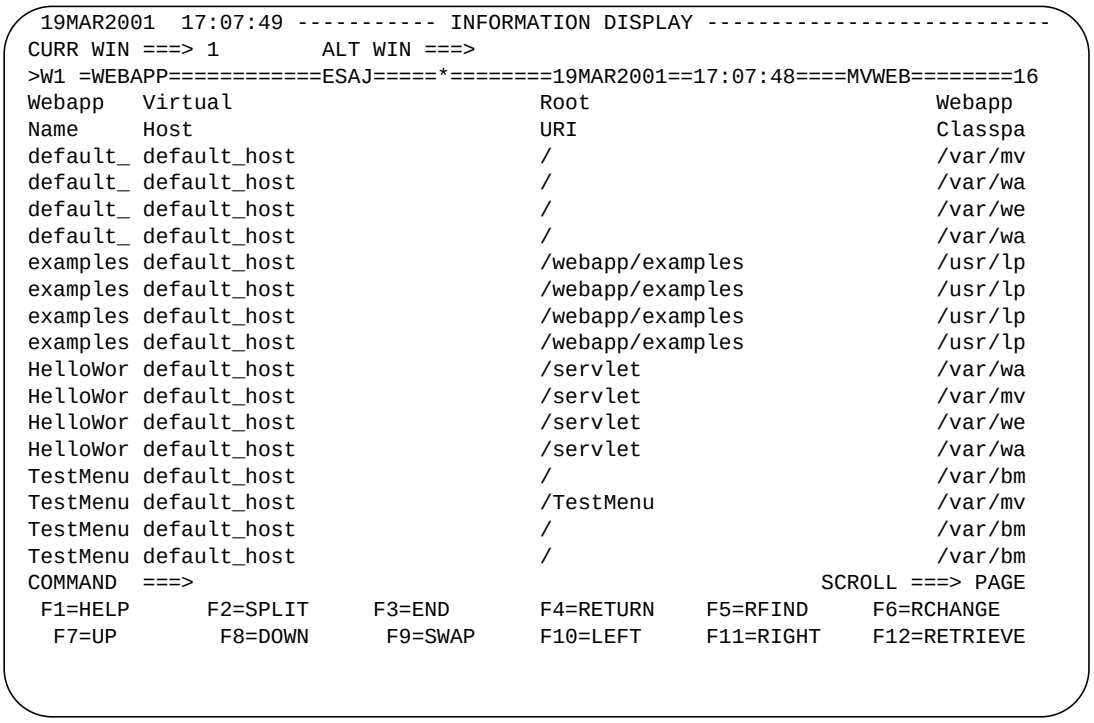
Figure 4-11 Application Servers View

Field	Description
Server Name	Indicates the name of the functional unit that provides services to one or more clients over a network
AppServe Version	Indicates the version of the supported protocol
HttpServ Jobname	Indicates the jobname of the HTTP server
HttpServ Asid	Indicates the system-assigned address space identifier for the HTTP server

Table 4-10 View Fields - Application Servers

Web Applications View

The Web Applications view (WEBAPP) provides information about the application servers monitored by the MAINVIEW for WebSphere product. Information includes server name, server version, jobname and address space identifier of the HTTP server.



```
 19MAR2001  17:07:49 ----------- INFORMATION DISPLAY ---------------------------
CURR WIN ===> 1        ALT WIN ===>
>W1 =WEBAPP============ESAJ=====*========19MAR2001==17:07:48====MVWEB========16
Webapp   Virtual                         Root                            Webapp
Name     Host                            URI                             Classpa
default_ default_host                    /                               /var/mv
default_ default_host                    /                               /var/wa
default_ default_host                    /                               /var/we
default_ default_host                    /                               /var/wa
examples default_host                    /webapp/examples                /usr/lp
examples default_host                    /webapp/examples                /usr/lp
examples default_host                    /webapp/examples                /usr/lp
examples default_host                    /webapp/examples                /usr/lp
HelloWor default_host                    /servlet                        /var/wa
HelloWor default_host                    /servlet                        /var/mv
HelloWor default_host                    /servlet                        /var/we
HelloWor default_host                    /servlet                        /var/wa
TestMenu default_host                    /                               /var/bm
TestMenu default_host                    /TestMenu                       /var/mv
TestMenu default_host                    /                               /var/bm
TestMenu default_host                    /                               /var/bm
COMMAND  ===>                                                 SCROLL ===> PAGE
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-12 Web Applications View

Field	Description
Webapp Name	Indicates the name of the web application running on the server
Virtual Host	Indicates the name of the virtual host running on the server
Root URI	Indicates the highest level Universal Resource Indicator
Webapp Classpath	Indicates the class grouping and path of the web application
Note: The > symbol in the window information line indicates there is more data to the right of the panel.	

Table 4-11 View Fields - Web Applications

Field	Description
Document Root	Indicates the highest path level of the document running on the server
AutoReload Interval	Indicates the time of auto reload for a specified interval
Server Jobname	Indicates the name of the jobname of the server

Table 4-11 View Fields - Web Applications

Servlets View

The Servlets view (SERVLET) provides information about the application programs that are executed on the Web Server.

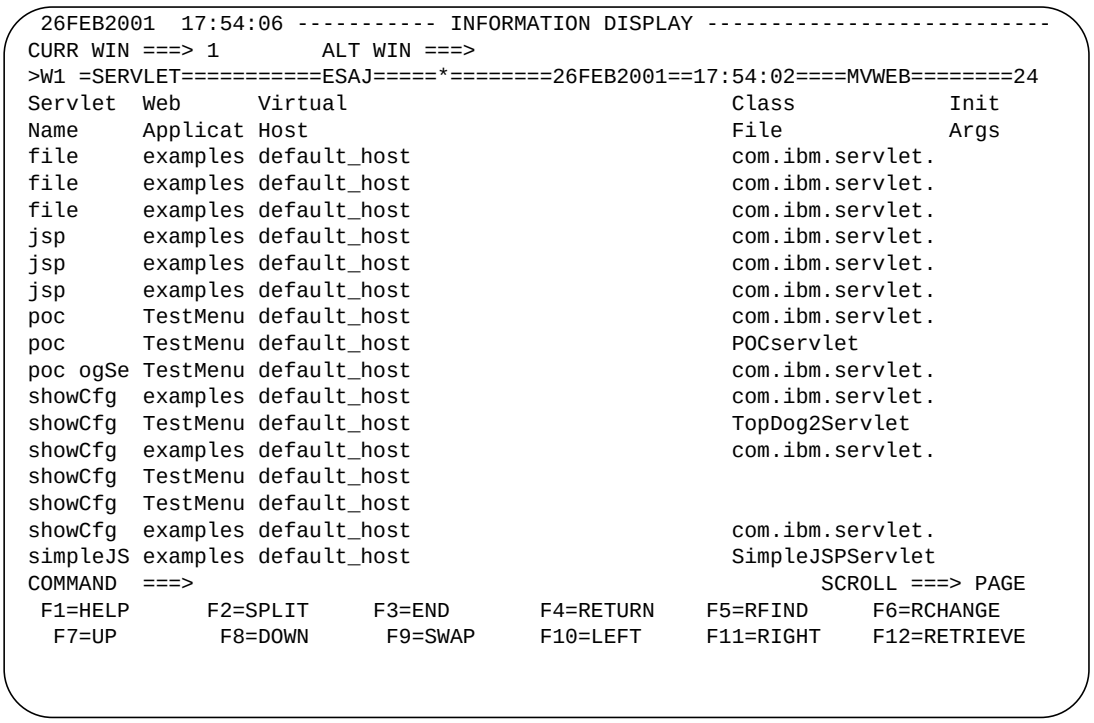


Figure 4-13 Servlets View

Field	Description
Server Name	Indicates the name of the functional unit that provides services to one or more clients over a network
Web Application	Indicates the type of application running on the Web Server
Virtual Host	Indicates the name of the virtual host running on the Web Server
Class File	Indicates the name of a particular file group
Init Args	Indicates an independent variable

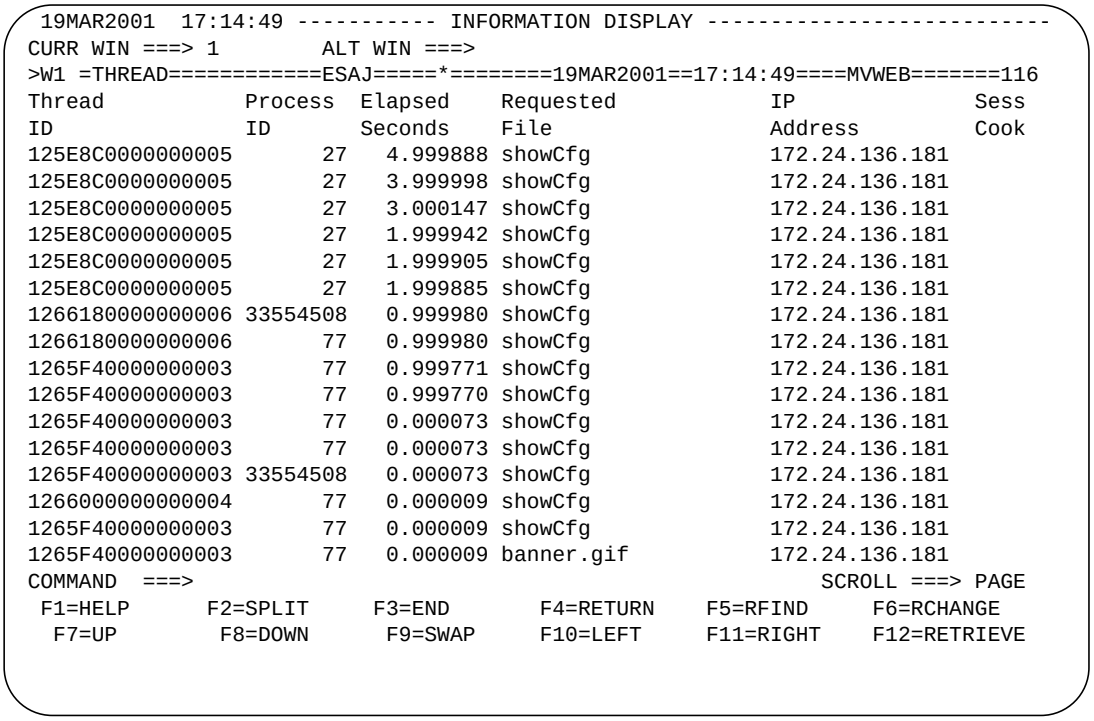
Table 4-12 View Fields - Servlets

Field	Description
Note: The > symbol in the window information line indicates there is more data to the right of the panel.	
Application Server	Indications the application functional unit that provides services to one or more clients over a network
Root URI	Indicates the highest level Universal Resource Indicator
Note: The > symbol in the window information line indicates there is more data to the right of the panel.	
Servlet Mapping	Indicates the mapping of an application program, written in the Java programming language, that is executed on the Web server
HttpServ JobName	Indicates the jobname of the HTTP server

Table 4-12 View Fields - Servlets

Threads View

The Threads view (THREAD) provides information about user sessions, including client requests, IP addresses, session cookies, and HTTP servers.



```
 19MAR2001  17:14:49 ----------- INFORMATION DISPLAY ---------------------------
CURR WIN ===> 1        ALT WIN ===>
>W1 =THREAD============ESAJ=====*========19MAR2001==17:14:49====MVWEB=======116
Thread           Process  Elapsed    Requested            IP              Sess
ID               ID       Seconds    File                 Address         Cook
125E8C0000000005       27   4.999888 showCfg              172.24.136.181
125E8C0000000005       27   3.999998 showCfg              172.24.136.181
125E8C0000000005       27   3.000147 showCfg              172.24.136.181
125E8C0000000005       27   1.999942 showCfg              172.24.136.181
125E8C0000000005       27   1.999905 showCfg              172.24.136.181
125E8C0000000005       27   1.999885 showCfg              172.24.136.181
1266180000000006 33554508   0.999980 showCfg              172.24.136.181
1266180000000006       77   0.999980 showCfg              172.24.136.181
1265F40000000003       77   0.999771 showCfg              172.24.136.181
1265F40000000003       77   0.999770 showCfg              172.24.136.181
1265F40000000003       77   0.000073 showCfg              172.24.136.181
1265F40000000003       77   0.000073 showCfg              172.24.136.181
1265F40000000003 33554508   0.000073 showCfg              172.24.136.181
1266000000000004       77   0.000009 showCfg              172.24.136.181
1265F40000000003       77   0.000009 showCfg              172.24.136.181
1265F40000000003       77   0.000009 banner.gif           172.24.136.181
COMMAND  ===>                                                SCROLL ===> PAGE
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-14 Threads View

Field	Description
Thread ID	Indicates the identifier of the stream of computer instructions that is in control of a process
Process ID	Indicates the identifier of the process (data) passed between the client and the host
Elapsed Seconds	Indicates the time (in seconds) passed between the client request to the host response
Requested File	Indicates the name of the requested file
IP Address	Indicates the host IP address that the server runs on

Table 4-13 View Fields - Threads

Field	Description
Note: The > symbol in the window information line indicates there is more data to the right of the panel.	
Session Cookie	Includes the set of data that a website server gives to the browser the first time the user visits the site, that is updated with each return visit (session)
HTTPServ Jobname	Indicates the jobname of the HTTP Server
HTTPServ ASID	Indicates the address space identifier of the HTTP Server
Client Request	Indicates the of request made by the client to the server

Table 4-13 View Fields - Threads

Response Summary View

The Response Summary View (STMDATAZ) view displays information provided by the Synthetic Transaction Monitor (STM) product. STM facilitates the recording of IP-based client/server transactions and the replay of those transactions at specified intervals.

```
 19MAR2001  17:19:14 ----------- INFORMATION DISPLAY ---------------------------
CURR WIN ===> 1        ALT WIN ===>
>W1 =STMDATAZ==========ESAJ=====*========19MAR2001==17:19:14====MVWEB=========6
Transaction      Num      Response Response       Response Response Xmitted Re
Description      Trans    Time     0.....50...100 Min      Max      Msgs    Ms
SYSM Server            19     9.65                    9.14    10.32       0
TopDog                109     1.01                   0.76     1.44      44
SYSO Server            67     0.48                   0.28     0.89       6
UnderDog               70     0.26                   0.13     0.70       1
TopDog1                71     0.26                   0.13     0.72       1
TopDog2                71     0.23                   0.13     0.62       1









COMMAND  ===>                                              SCROLL ===> PAGE
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-15 Response Summary View

Field	Description
Transaction Description	Indicates the description sent in the XML data report for a web-based transaction
Num Trans	Indicates the number of transactions transmitted to and from the server
Response Time	Indicates the elapsed time for completed transaction
Xmitted Msgs	Indicates the number of data segments or requests sent to the server in the transaction

Table 4-14 View Fields - Response Summary

Field	Description
Recv'd Msgs	Indicates the number of data segments or requests received from the server in the transaction
Note: The > symbol in the window information line indicates there is more data to the right of the panel.	
Xmitted Bytes	Indicates the number of bytes of application data sent to the server
Recv'd Bytes	Indicates the number of bytes of application data received from the server
K-bytes Per-sec	Indicates the number of kilobytes transmitted per second
Percent Matched	Indicates the percentage difference between the measured transaction and the original recorded data
Workstation Name	Indicates the name of the workstation that initiated the transaction
Status	Indicates the operational activity of the server
Comp Code	Indicates identification code of computer
Process ID	Indicates the name of the process to record, such as IEXPLORE.EXE

Table 4-14 View Fields - Response Summary

Response Details View

The Response Details View (STMDATA) view displays detailed information provided by the Synthetic Transaction Monitor (STM) product. STM facilitates the recording of IP-based client/server transactions and the replay of those transactions at specified intervals.

```
03FEB2001 13:21:02 ----------- INFORMATION DISPLAY ---------------------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =STMDATA==========SYSM=====*========03JUN2000==13:21:02====MVWEB=======144
 Transaction      Response Xmitted Recv'd  Xmitted   Recv'd    K-bytes Percent
 Description      Time     Msgs    Msgs    Bytes     Bytes     Per-sec Matched
 ONLINE BANKING      57.40      78      92      5873    150936       2      65
 PAYROLL QUERY       37.28      66      79      5923    142958       3      49
 PARTS INVENTORY     60.30      78      83      5164    152858       2       7
 ONLINE BANKING      53.13      78      91      5873    150936       2      65
 PAYROLL QUERY       40.20      66      79      5923    142818       3      49
 PARTS INVENTORY     59.84      78      83      5164    152858       2      13
 ONLINE BANKING      55.13      78      91      5873    150936       2      65
 PAYROLL QUERY       37.34      66      80      5923    142960       3      49
 ONLINE BANKING      83.62      74      86      5651    149158       1      63
 PARTS INVENTORY     59.44      78      82      5164    152858       2      13
 PAYROLL QUERY       41.41      66      78      5923    142808       3      49
 PARTS INVENTORY     59.79      78      82      5164    152858       2      13
 ONLINE BANKING      57.10      78      91      5873    150936       2      65
 PAYROLL QUERY       42.18      66      76      5923    142786       3      49
 PARTS INVENTORY     65.45      70      78      5164    151750       2       8
 ONLINE BANKING      61.46      62      79      4721    131736       2      54
 F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
 F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=RETRIEVE
```

Figure 4-16 Response Details View

Field	Description
Transaction Description	Indicates the description sent in the XML data report for a web-based transaction
Response Time	Indicates the elapsed time for completed transaction
Xmitted Msgs	Indicates the number of data segments or requests sent to the server in the transaction
Recv'd Msgs	Indicates the number of data segments or requests received from the server in the transaction

Table 4-15 View Fields - Response Details

Field	Description
Xmitted Bytes	Indicates the number of bytes of application data sent to the server
Recv'd Bytes	Indicates the number of bytes of application data received from the server
K-bytes Per-sec	Indicates the number of kilobytes transmitted per second
Percent Matched	Indicates the percentage difference between the measured transaction and the original recorded data
Note: The > symbol in the window information line indicates there is more data to the right of the panel.	
Workstation Name	Indicates the name of the workstation that initiated the transaction
Status	Indicates the operational activity of the server
Comp Code	Indicates identification code of computer
Process ID	Indicates the name of the process to record, such as IEXPLORE.EXE
Transact Keywords	Category keywords created by user in STM that are reported with transaction statistics
Thres Hold	Indicates the threshold condition
Connect Time	Indicates the connection time
Current Time	Indicates the time during which the transaction occurred Format - HH:MM:SS
Current Date	Indicates the date on which the transaction occurred Format - MM/DD/YYYY

Table 4-15 View Fields - Response Details

MAINVIEW for WebSphere Sub-menus

MAINVIEW for WebSphere also has EZ sub-menus for Log File Analysis. To view sub-menu information, select the sub-menu on the MAINVIEW for WebSphere EZ Menu (EZWEB).

The sub-menus that display log file analysis information include:

- Hourly Access (EZHACC)
- Hourly Errors (EZHERR)
- Authentication Errors (EZAUTH)
- Files Not Found (EZHFILE)

On these sub-menus, morning and evening timeframes display in one hour increments. To view specific log file analysis information, select the timeframe on the applicable sub-menu. You can also view information for the current timeframe (Most Recent).

Summary Views

MAINVIEW for WebSphere also has summary views. These views provide a summary display of web server data available for Web Server and Log File Analysis.

The Web Server summary views for this product include:

- Traffic by Client (UVOLSUM)
- Access by Client (UACCSUM)
- Access by File (FILESUM)
- Access Stats by Hour (ACCSTAT)
- Error Stats by Hour (ERRSTAT)
- Server Errors (ERRORSZ)

The WAS (Web Application Server) summary views for this product include:

- Servlet Hits (THREADZ)
- Servlet by WebApp (SERVLETZ)
- Servlet by HTTP Server (SERVBJOB)
- Activity by Cookie (SERVCOOK)
- WebApp by Virtual Host (VHOSTZ)
- WebApp by HTTP Server (WEBAPPZ)
- WAS Performance (WASPERF)

On these summary EZ menus, morning and evening timeframes display in one hour increments. To view specific summary information, select the timeframe on the summary EZ menu. Select **Most Recent** on the EZ menu to view information for the current timeframe.

Appendix A Troubleshooting Tips

This appendix provides tips to help you resolve problems you may encounter with the MAINVIEW for WebSphere and Synthetic Transaction Monitor products. This appendix covers the following topic:

Frequently Asked Questions (FAQs)

Here is a list of questions frequently asked about MAINVIEW for WebSphere and Synthetic Transaction Monitor:

Is there a difference between ACF 2 and RACF when it comes to assigning the userID for the MAINVIEW for WebSphere PAS (MV PAS)?

Assign a userID for MV PAS with the same permission as that of the Web Server for ACF 2. The userID can be the same as that of the Web Server.

The MV PAS can have the same userID as that of the Web Server for RACF. Be sure to assign a userID with the OMVS segment authority to the MV PAS started task.

Note: If you do not assign the userID, the started task subsystem can not make any socket calls. Numerous error messages will be generated.

What is the search order that MAINVIEW for WebSphere uses to find a TCPIP.DATA file in a multi-stack environment?

MAINVIEW for WebSphere uses the search order below to find a TCPIP.DATA file. When verification is affirmative, the product uses the file or statement.

1. Verifies the existence of ETC.RESOLV.CONF.
2. Checks whether a SYSTCPD DD statement is coded explicitly in the proc.
3. Verifies the existence of SYS1.TCPPARMS(TCPDATA).
4. Verifies the existence of TCPIP.TCPIP.DATA.
5. Verifies the existence of TCPIP.DATA.

Note: If you are passing any runtime arguments to the SAS/C resolver, the search order could be invalid.

During the installation of MAINVIEW for WebSphere, the SYSTCPD DD card should specify a TCPIP.DATA file reference in the MAINVIEW for WebSphere PAS.

There are problems with the SNMP environment. Any there any troubleshooting tips that could be helpful in working these problems?

Consider the following **Q & A** to troubleshoot problems with the SNMP environment:

Question
Is the SNMP directive in the correct httpd.conf file set to ON?

Answer
The default file is /etc/httpd.conf. This file can be overridden using the -r startup option.

Question
Is the SNMP Community directive in the httpd.conf file set to public?

Answer
MAINVIEW for WebSphere only supports the public community.

Question
Is the SNMP daemon up?

Answer
Issue the console command `d tcpip,stackname,netstat.conn`

To verify, check output for data similar to the following:

User ID (OSNMPD2) CONN (0028C) LOCAL SOCKET (0.0.0.0..1027) FOREIGN SOCKET (0.0.0.0..00) STATE (Listen for subagents)

User ID (OSNMPD2) CONN (0028B) LOCAL SOCKET (0.0.0.0..161) FOREIGN SOCKET (*..*) STATE (TCP/UDP Protocol)

The User ID is the name of the daemon task. Both connections must be up for the Web Server to connect.

Note: If this connection is not present, the Web Server cannot report to SNMP.

Question
Is the Web Server connected to the SNMP daemon?

Answer
Issue the console command `d tcpip,stackname,netstat,conn`

To verify, check the data output for the following:

IMWEBSRV 0000001F 172,17,4.103,,1028 172.17.4.103..1027 ESTABLS

OSNMPD 00000020 172.17.4.103..1027 172.17.4.103..1028 ESTABLS

This is the two-way connection between the SNMP agent and the Web Server.

Users can run the osnmp get IVP program and collect data.

Note: If this connection is not present, data cannot be collected.

Question
Does the osnmp get command work?

Answer
Yes. There is no sign of data in the MAINVIEW for WebSphere product.

No. Mult-stacks could be causing the problem.

The incorrect SYSTCPD file could be in use. Determine which SYSTCPD file is being allocated when you run the osnmp get command. Ensure that MAINVIEW for WebSphere is picking up the same file

How do you record, play, and report a transaction with the Synthetic Transaction Monitor (STM)?

After you install STM on the PC, a tape recorder icon will appear in the PC system tray.

Note: Close all Microsoft Internet Explorer sessions before you begin the record and play procedures.

To record, play, and report a transaction to your s/390 Web Server, complete the following steps:

Record a Transaction

1. Right-click the recorder icon and select **Record and Play Transactions...**

2. Click **OK** in the **Important Note** dialog.

3. Select a recording file name and click **Record**.

4. Start a Microsoft Internet Explorer session.

Note: The numbers (Connections and Total Bytes) in your recording dialog should change.

5. Use the browser to navigate the s/390 Web Server.

6. Click **Stop** to end the recording of the browser session and shutdown your browser.

Play a Recorded Transaction

1. Click **Play** to test the recorded transaction.

2. An **Important Tip** dialog is displayed if the recording was successful. Click **OK** to close the dialog.

3. Click **Playback Settings...**

4. Select **On regular intervals** and click **OK** to accept the playback interval value.

Tip: You can change the Description which displays as a line item in MAINVIEW for WebSphere panels.

5. Click **OK**.

6. Click **Yes** to save changes.

7. Click **OK**. A test transaction runs in the run location that you indicated.

8. View the Response Times reports in MAINVIEW for Websphere.

Set Up Reporting of Recorded Transactions

1. Click **Scheduler...** to test the reporting function.

2. Click the line item **Report to: website** and click **Settings**.

3. Verify that the server name points to the Web Server where MAINVIEW for WebSphere is running.

4. Verify the path is the same location as the MVSTMCGI program.

   The server root is implied. The default path includes: /usr/lpp/internet/server_root.

Note: You will probably have to change the path. MVSTMCGI is installed under cg-bin. The installation path is /cgi-bin/mvstmcgi.

There are problems with the STM Response Time panels in MAINVIEW for WebSphere, could there be problems with the STM set up?

Consider the following **Q & A** to troubleshoot problems with the STM Response Time panels:

Question
Did the MVCPY step of the BBCUST process run correctly?

Answer
The hfs path of the script is specified in MVCPY job.

Question
Does the script reside in a path where CGI scripts are allowed to run?

Answer
Make sure the correct httpd.conf file has a similar statement:
`Exec/cgi-bin/*/usr/lpp/internet/server_root/cgi-bin/*`

A directive on the server should point to the path where mvstmcgi was written.

Question
Does the STM Transaction Scheduler on the workstation point to this script?

Answer
The STM Report Settings path must point to the script URI.

Test for the path pointer: Click **OK** on the STM Report Settings dialog. If there is an error, the script on the server is not configured correctly.

Question
Does the Product Address Space (PAS) point to the correct stm.log file?

Answer
The stm.log file is written to the same directory path as that of the cgi program. If you change the STMDATA DD path, STM will not find the data.

Make sure the following DD statement is correctly implemented in the PAS started task:

```
//STMDATA DD PATH='/user/lpp/internet/server_root/cgi-gin/stm.log'
//PATHOPTS=(ORDONLY,OCREAT),PATHMODE=(SIRWXU,SIRWXG,SIRWXO)
```

Appendix B BMC Product Software Authorization

This appendix explains how to perform product authorization. The following sections are included in this appendix:

Overview

When the BMC Software Contracts Administration department processes a license agreement for a product, it also issues *CPU authorization passwords*. These passwords are used to authorize specific CPUs to run the licensed product. Since BMC Software licenses its products for use on individual CPUs, the passwords are product- and CPU-specific (one license per product per CPU). You must also have a password to delete or replace an authorized CPU.

There are two types of passwords.

- Temporary passwords are issued for product trials or in other special circumstances (for example, when a hardware failure prevents you from using the authorized CPU).

- Permanent passwords are issued when you convert to a permanent license, to delete or replace a CPU, and to modify the properties of a CPU or the product authorization tables.

The BMC Software Product Authorization utility is the means you use to apply passwords and change your CPU configuration.

Note: You do not need to apply passwords or update CPU authorization when you install product maintenance or version upgrades.

Passwords can be processed in one of two ways:

- as part of an online procedure
- in batch mode, using a job supplied on the product distribution tape

This appendix describes the process you use to apply passwords and reconfigure your CPU, either permanently or temporarily using both the batch and online interfaces.

If you have authorization questions or concerns, please contact your BMC Software sales representative.

Product Authorization Tables

When passwords are applied, the BMC Software Product Authorization utility builds or updates product authorization tables. The passwords are used to create entries in the tables that define the authorization for the product. The password is temporary. After the password is applied, it is the entry in the product authorization table that is used to validate software licenses.

There are two kinds of product authorization tables: permanent and temporary. A permanent product authorization table is built or updated when a permanent password is installed or applied, and a temporary product authorization table is built or updated when a temporary password is applied.

These tables are product-specific and are identified by the three-character product code as in the following examples:

*ppp*TBL3P (permanent)

*ppp*TBL3T (temporary)

where *ppp* is the three-character product code.

Occasionally, the Product Authorization utility must update the authorization tables. If the product load library must be WRITE-protected, problems could occur with updates. To avoid problems, you can place the authorization tables in another data set and concatenate that data set to the product's load library.

The concatenated authorization table library should have the same DCB attributes as the product's load library (the RECFM for the table library must be U). If you have several BMC Software products, you might want to dedicate one library that includes all authorization tables for all products.

Before updating the library containing the authorization tables, the Product Authorization utility determines whether the data set is in LINKLST. If it is a LINKLST library, the Product Authorization utility will not attempt an update.

How Products Are Licensed

You will need to use the Product Authorization utility in the following situations:

- for product trials and permanent licensing
- when upgrading to a new CPU
- when an authorized CPU fails

Note: Although you do not need the Product Authorization utility for product maintenance and version upgrades, there are issues you must consider.

Product Trials and Permanent Licensing

During a trial period for a BMC Software product, you can install and use the product on any CPU, using a temporary password obtained from your BMC Software sales representative. When your trial is finished and you want to obtain a product license, the following rules apply:

- You must purchase a product license for each CPU on which you will execute the product.
- BMC Software Contracts Administration issues a permanent password for each combination of CPU and licensed product.
- To enable a product on a CPU, you must add the permanent password issued for that CPU. You do *not* need to reinstall and retest the product.
- You can install multiple passwords in the same product library. This allows you to use the same load library to run a product on multiple CPUs or to install a product at a central site and run it at remote sites.

CPU Upgrades

When you upgrade to a new CPU, you *must obtain a new permanent password for each product you want to use on that CPU*. When you install the new password, the old entry in the authorization table for the product is replaced. The new table entry then defines the authorization for the product.

CPU Failures

If a hardware failure or a disaster recovery situation prevents use of the licensed CPU, BMC Software can provide a temporary license that allows the product to run on a backup CPU for a limited time. Before the temporary license expires, you must acquire a permanent license for the new CPU or resume using the original CPU. Otherwise a grace period can be triggered, at the end of which you will no longer be able to execute the affected product on either CPU. If this occurs, you will need to obtain a new password to reset the grace period.

Product Maintenance or Version Upgrades

Installing a new maintenance level or upgrading the version or release level of a product has no effect on product authorization. No new passwords are required; however, you must ensure that your authorization tables reside in the new production libraries. If you install products in a test environment before moving them to production, the authorization tables must also reside in the test libraries. If you try to execute the product on a different CPU, that CPU must also be licensed.

The product authorization tables should be copied from the “old” library to the “new” library that contains the product's new maintenance or upgrade.

Although the product authorization tables typically reside in the product's load library, these tables are not load modules. If you are running ISPF V4.2 or above, you might not be able to copy these tables using the ISPF Move/Copy utility (option 3.3). You could receive a STOW error or one or more of the following error messages:

```
IEW2515W 4731 DIRECTORY ENTRY FOR cccTBL3n IDENTIFIED BY
DDNAME ISPxxxxx IS NOT MARKED AS LOAD MODULE.

IEW2522E 470E MEMBER cccTBL3n IDENTIFIED BY DDNAME
ISPxxxxx... IS NOT A LOAD MODULE- (INVALID RECORD TYPE).

IEW2307S 1032 CURRENT INPUT MODULE NOT INCLUDED BECAUSE
OF INVALID DATA.

COPY FAILED FOR MEMBER cccTBL3n.  FAILURE IN IEWBIND
INCLUDE, RETURN CODE 8 REASON CODE 83000507
```

where `xxxxx` is the ddname, `ccc` is the 3-character product code and `n` is either `P` (permanent) or `T` (temporary). See “Product Authorization Tables” on page B-3 for more information.

If you receive any of these messages, use the IEBCOPY utility to copy the tables. Do not use the IEBCOPY COPYMOD parameter when copying the product authorization tables.

How to Obtain Passwords

The password given to you by BMC Software Contracts Administration or your BMC sales representative should be considered an activation key for the software license; the passwords do not represent the software license itself. Apply these passwords as soon as possible after you receive them because permanent passwords have a limited lifespan—typically 30 days. The product itself does not have to be completely installed for you to apply the passwords as long as the Product Authorization utility has been installed, and the product load library has been downloaded.

The passwords can be applied even if the product is not yet executing on a specific CPU. For example, if your install process requires that you install and execute the product on a test system before migrating it to the production system, you can apply the password for the production system's CPU, even though the product is not yet running there.

These passwords create the product authorization tables and insert entries into them. After the passwords are applied, they are no longer needed. The entries in the authorization tables contain the licensing information. You should copy these tables from the old library to the new one when you subsequently apply maintenance.

Password Scenarios

Table B-1 describes the situations in which you need to obtain passwords. For each scenario, the table indicates the type of password that you need (temporary or permanent), what the password does, and how to obtain it.

Table B-1 Password Scenarios

Scenario	Password Type	Password Function	Obtain From
You want to begin a free trial period	Temporary	Temporarily bypasses authorization checking and allows you to run the product on any CPU for a limited time	BMC Software sales representative

Table B-1 Password Scenarios

Scenario	Password Type	Password Function	Obtain From
You purchase a license for a new product	Permanent	Adds a designated CPU to the list of CPUs authorized to run a licensed product	BMC Software Contracts Administration (which issues a password after processing the license agreement)
You stop using an authorized CPU	Permanent	Removes a designated CPU from the list of CPUs authorized to run a licensed product	BMC Software sales representative or BMC Software Contracts Administration
You upgrade to a new CPU	Permanent	Authorizes the transfer of a license from one CPU to another	BMC Software sales representative or BMC Software Contracts Administration
You want to run the product on an additional CPU	Permanent	Adds a designated CPU to the list of CPUs authorized to run a licensed product	BMC Software Contracts Administration (which issues a password after processing the license agreement)
The authorized CPU is not available because of an emergency (such as hardware failure)	Temporary	Temporarily bypasses authorization checking and allows you to run the product on any CPU for a limited time	BMC Software sales representative, BMC Software Contracts Administration, or Product Support
The grace period has been triggered and needs to be reset	Permanent	Resets the grace period	BMC Software sales representative or BMC Software Contracts Administration

CPU Information

When you request a product license from BMC Software, you must furnish information about the affected CPUs. For each product you want to license, use the worksheet in Table B-2 to record the CPU information and the passwords you receive from BMC Software. CPU information is not needed for temporary or trial passwords because they are temporary.

Table B-2 Product Authorization Work Sheet

CPU Serial	CPU Type	Version Code	CPU Model	No. of CPUs	Permanent Password
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __

Table B-2 Product Authorization Work Sheet

CPU Serial	CPU Type	Version Code	CPU Model	No. of CPUs	Permanent Password
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __

For example, a 9X2 with three processors and a CPU ID of 10309-9021-DA would be listed as in the following sample:

CPU Serial	CPU Type	Version Code	CPU Model	No. of CPUs	Permanent Password
10309	9021	DA	9X2	3	123,456,789,ABC

For information about determining your CPU ID, see “Displaying Current Processor Information” on page B-25 or use the LIST option of Batch Product Authorization (see page B-28).

Product Authorization Passwords

The Product Authorization utility interface (online or batch) is used to apply temporary and permanent passwords for using BMC Software products.

A valid password can comprise the following characters:

- the alphanumeric character set, excluding the letter “I” and the letter “O” (to avoid confusion with the numbers one (1) and zero (0)

- the equal sign (=), the at sign (@), and the plus sign (+)

  Note: Some nondomestic keyboards do not have the “at” sign (@). For this reason, the asterisk (*) has been designated as a synonym for @. These two characters (@ and *) can be used interchangeably when typing passwords.

Permanent Passwords

Permanent passwords are used to update a product’s permanent authorization table. The permanent table controls which CPUs are licensed to run the product, based on the serial number, model number, and submodel number of the unit(s). Permanent passwords can be used to perform five different functions—add, delete, replace, modify, or reset. When you apply the permanent password, the product authorization program automatically distinguishes the function for the specified password and prompts you accordingly. Each of these functions is described in Table B-3.

Table B-3 Permanent Password Functions

Function	Description
Add	Authorizes one new CPU to run the product.
Delete	Removes one CPU from the table, preventing that CPU from running the product.
Replace	Replaces one CPU in the table with another CPU, allowing the new CPU to run the product in place of the old CPU.
Modify	Modifies one or more properties of one CPU that currently exists in the product authorization table. CPU properties that can be modified include the version code, number of significant digits for the serial number, tier, maximum number of processors, and product license expiration date.
Reset	Modifies the global properties of the product authorization tables.

Temporary Passwords

Temporary passwords are issued to customers who are evaluating BMC Software products on a trial basis and to customers who need to bypass BMC Software product authorization to run the product temporarily on an unlicensed CPU. Temporary passwords have a specific expiration date, which is part of the password.

Executing a Product on an Unlicensed Processor

When a product is executed on an unlicensed processor, a 15-calendar-day grace period can be triggered. After this grace period expires, the product will not execute or will execute with diminished functionality.

To prevent this, you should obtain a RESET password from BMC Software Contracts Administration. Apply the RESET password before the grace period ends to avoid problems. The RESET password updates the product authorization table and makes available another 15-calendar-day grace period.

When the grace period is triggered, a message is issued by the Product Authorization utility (either online or in batch) and by the affected product to advise you of the expiration date.

Note: The product will continue to function normally when executed on a licensed CPU, even if the grace period has been triggered or has expired.

Online Product Authorization

This section describes the interactive interface used for product authorization. If you prefer to apply passwords using the batch interface, see “Batch Product Authorization” on page B-26.

Processing a Permanent Password

Use the BMC Product Authorization Primary Menu (Figure B-1) to process passwords and obtain pertinent information about the current processor and the authorization for that processor.

Figure B-1 BMC Product Authorization Primary Menu (SECTPPRI)

```
  File  Display  Help
--------------------------------------------------------------------------------
SECTPPRI
               BMC Product Authorization Primary Menu

 Type the following information if applicable or pull down an item from the
 action bar. Then press Enter.


 Product load library . . . BMC.PRODUCT.LOAD_____________________________

 Authorization password . . ___  ___  ___  ___









Command ===> _____________________________________________________________________
```

To process a password provided to you by BMC Software Contracts Administration, type the name of the product's load library and the authorization password and press Enter. Use this option to add, delete, replace, modify, or reset passwords. The Product Authorization utility automatically identifies the type of password and displays the appropriate panel.

Product load library Type the name of the load library for the product or the name of the data set that will contain the product authorization table. This information is saved in the user's ISPF profile and defaults to the library specified here after it is entered once. The data set name must be fully qualified, with or without single quotation marks.

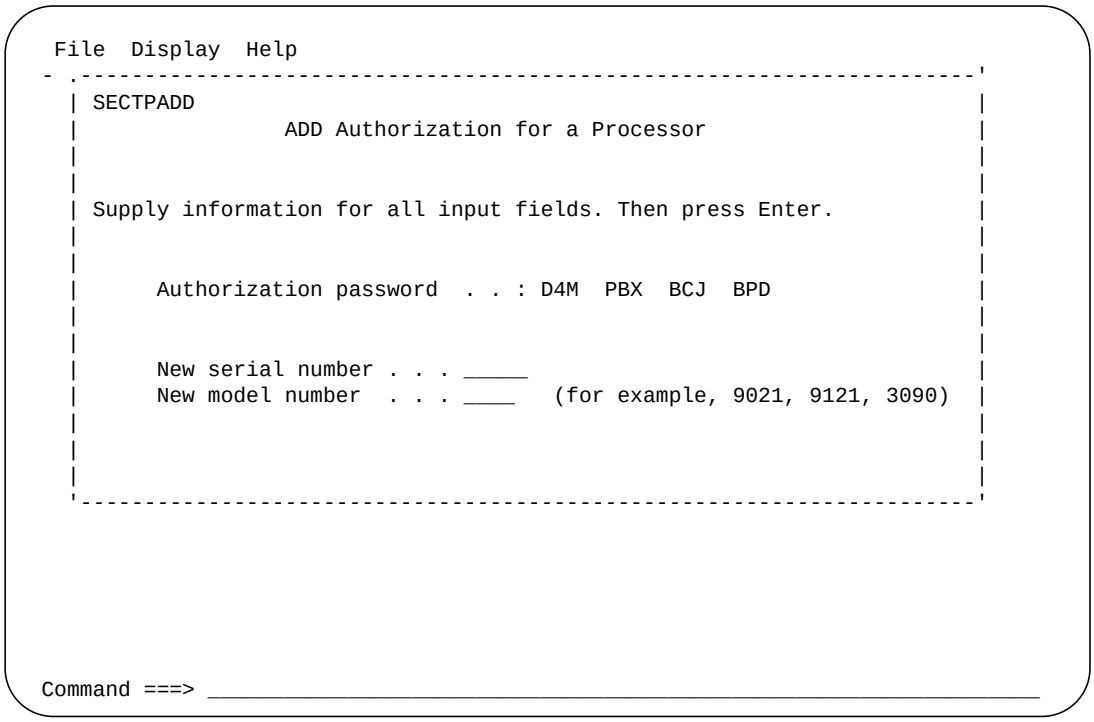
Authorization password

Type the authorization password for the product. If you do not have an authorization password, contact a BMC Software sales representative or BMC Software Contracts Administration.

ADD Authorization for a Processor

Use the ADD Authorization for a Processor panel (Figure B-2) to authorize a new CPU to run the product.

Figure B-2 Add Authorization for a Processor (SECTPADD)



Authorization password

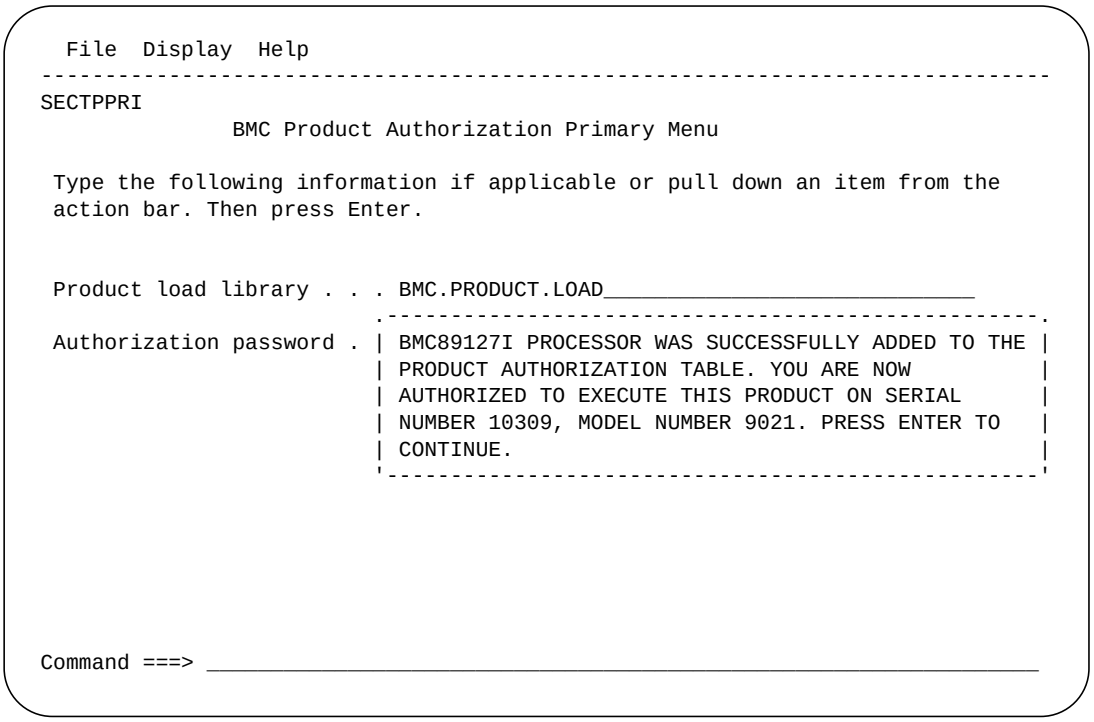
The password previously specified is displayed.

New serial number Type the serial number of the processor for which you are adding authorization.

New model number Type the model number of the processor for which you are adding authorization.

A popup message explains that the product authorization table was successfully modified, adding the specified processor to the table (Figure B-3).

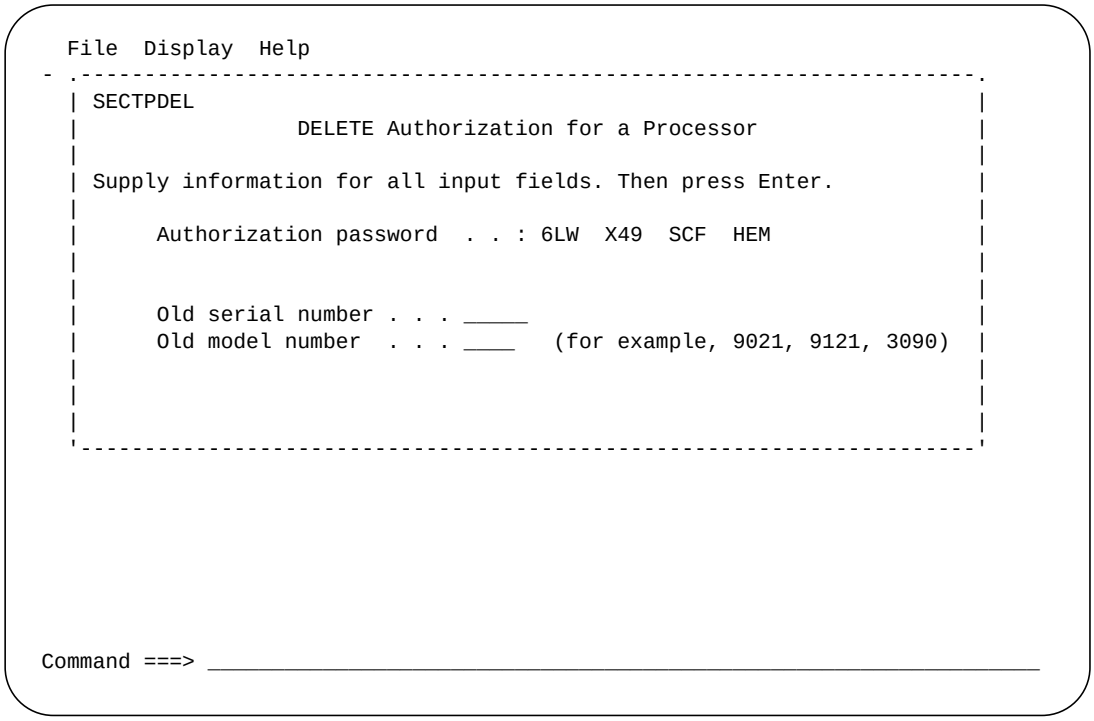
Figure B-3 Product Authorization ADD Message



DELETE Authorization for a Processor

Use the DELETE Authorization for a Processor panel (Figure B-4) to remove a CPU from the product authorization table.

Figure B-4 DELETE Authorization for a Processor (SECTPDEL)



Authorization password

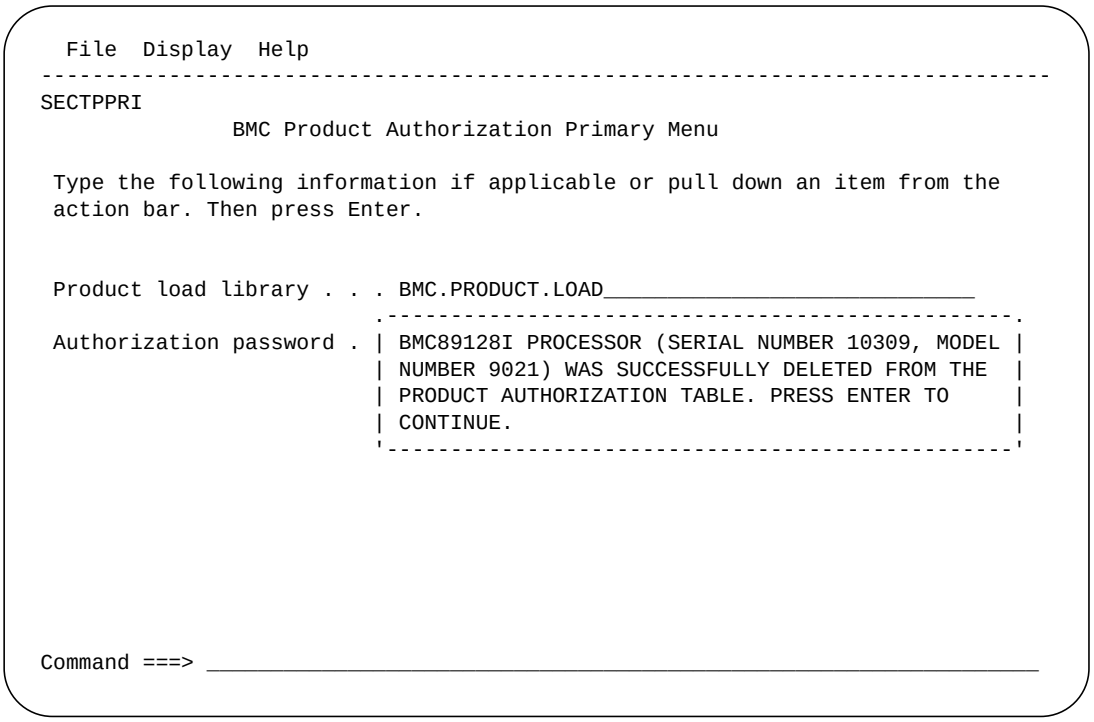
The password previously specified is displayed.

Old serial number Type the serial number of the processor for which you are deleting authorization.

Old model number Type the model number of the processor for which you are deleting authorization.

A popup message explains that the product authorization table was successfully updated, deleting the specified processor from the table (Figure B-5 on page B-14).

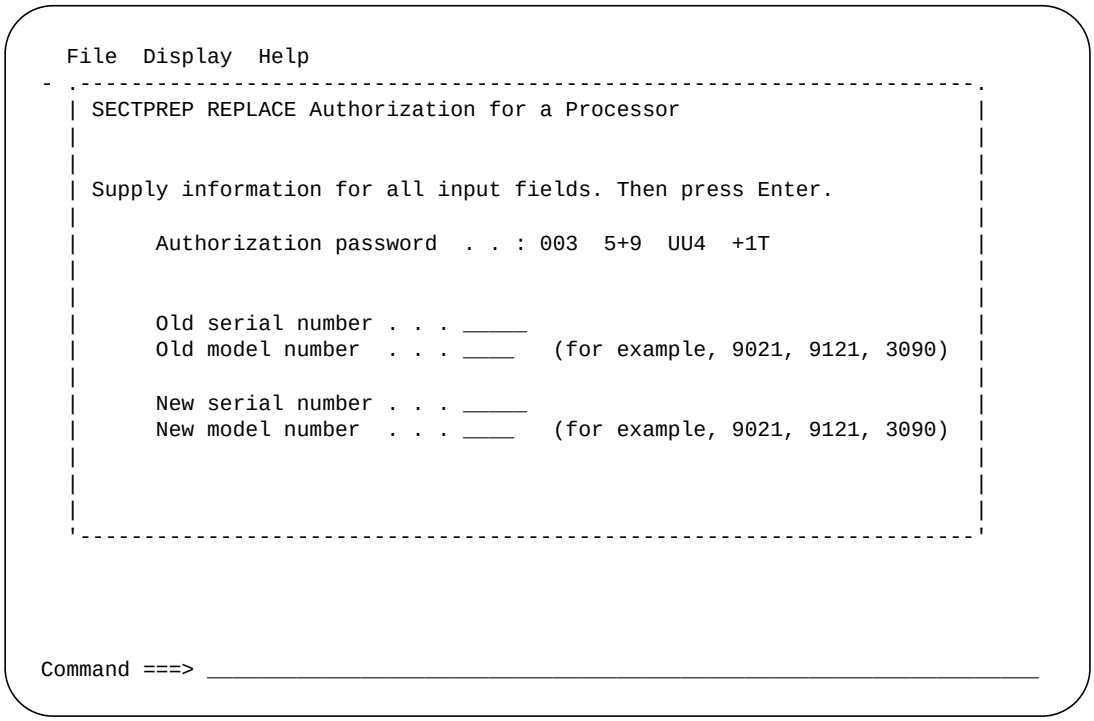
Figure B-5 Product Authorization DELETE Message



REPLACE Authorization for a Processor

Use the REPLACE Authorization for a Processor panel (Figure B-6) to replace one CPU in the product authorization table with another CPU, allowing the new CPU to run the product in place of the old CPU.

Figure B-6 REPLACE Authorization for a Processor (SECTPREP)



Authorization password
The password previously specified is displayed.

Old serial number Type the serial number for the processor to be replaced.

Old model number Type the model number for the processor to be replaced.

New serial number Type the serial number of the processor that will replace the old processor.

New model number Type the model number of the processor that will replace the old processor.

A popup message explains that the product authorization table was successfully updated, replacing the old processor with the new processor in the table (Figure B-7).

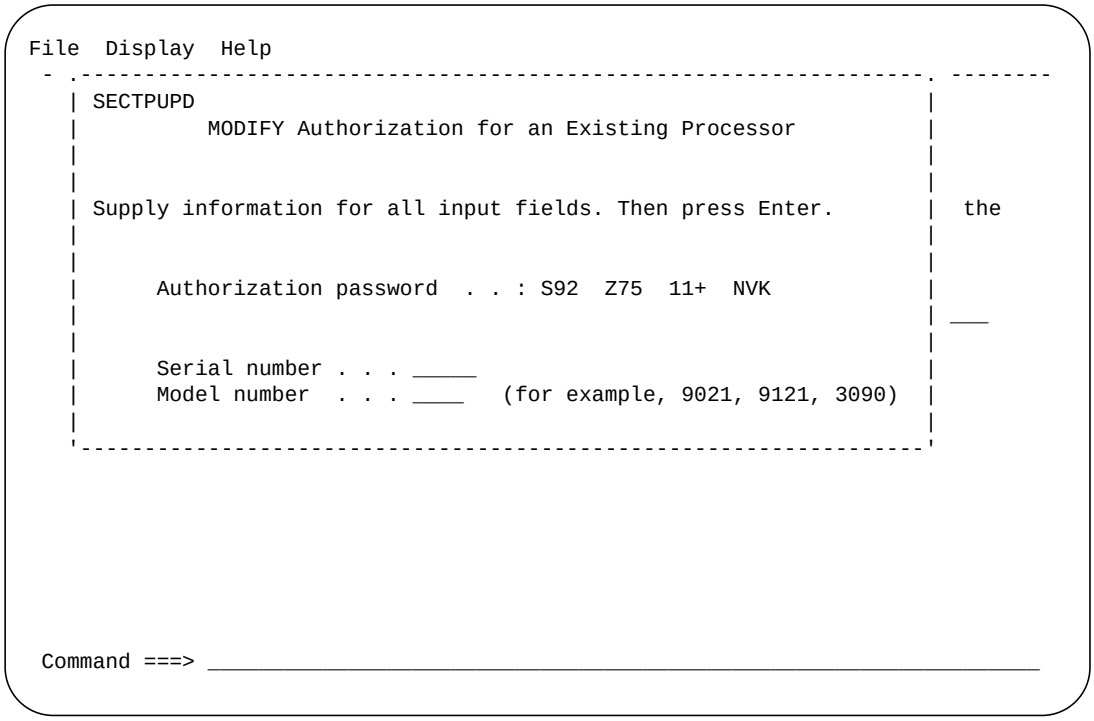
Figure B-7 Product Authorization REPLACE Message

```
 File  Display  Help
--------------------------------------------------------------------------------
SECTPPRI
              BMC Product Authorization Primary Menu

Type the following information if applicable or pull down an item from the
action bar. Then press Enter.


Product load library . . . BMC.PRODUCT.LOAD_____________________________
                          .-------------------------------------------------.
Authorization password . | BMC89129I PROCESSOR WAS SUCCESSFULLY REPLACED IN |
                         | THE PRODUCT AUTHORIZATION TABLE. YOU ARE NOW     |
                         | AUTHORIZED TO EXECUTE THIS PRODUCT ON SERIAL     |
                         | NUMBER 74403, MODEL NUMBER 3090. PRESS ENTER TO  |
                         | CONTINUE.                                        |
                         '-------------------------------------------------'




Command ===> ____________________________________________________________________
```

MODIFY Authorization for an Existing Processor

Use the MODIFY Authorization for an Existing Processor panel (Figure B-8) to change one or more properties of an existing CPU in the product authorization table. These properties include the version code, number of significant digits for the serial number, tier, maximum number of processors, and product license expiration date.

Figure B-8 MODIFY Authorization for an Existing Processor (SECTPUPD)



Authorization password

The password previously specified is displayed.

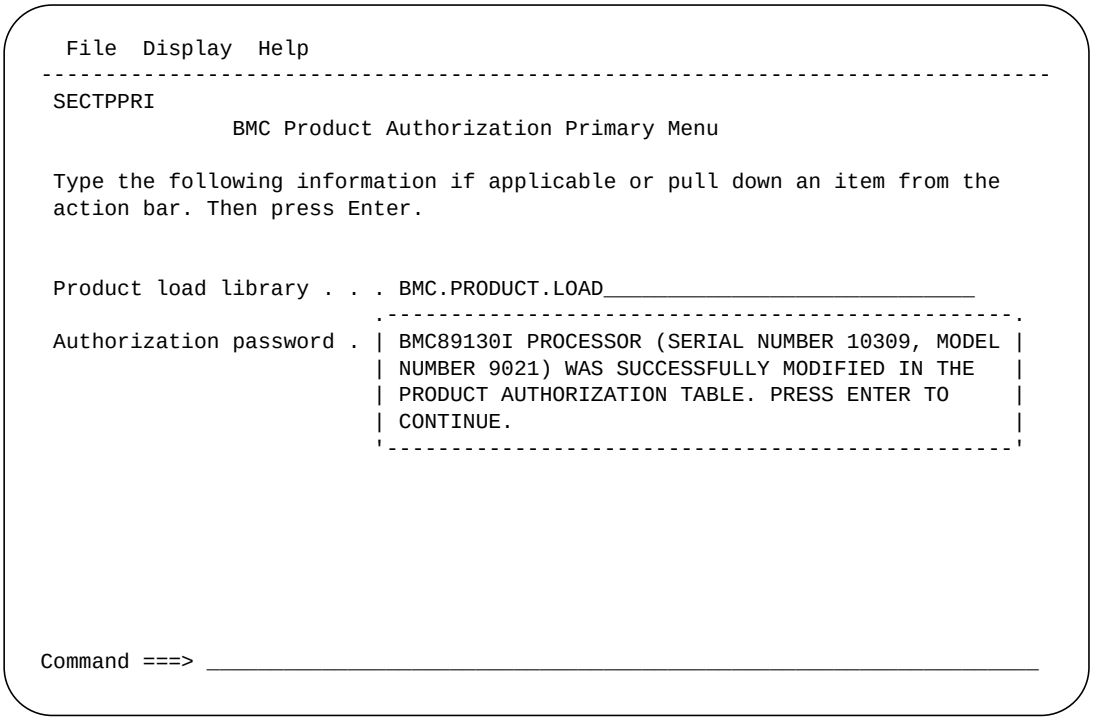
Serial number Type the serial number of the processor for which you want to modify the authorization.

Model number Type the model number of the processor for which you want to modify the authorization.

The properties are automatically modified by applying the new password.

A popup message explains that the product authorization table was successfully updated, modifying the properties of the specified CPU ID entry in the table (Figure B-9).

Figure B-9 Product Authorization MODIFY Message

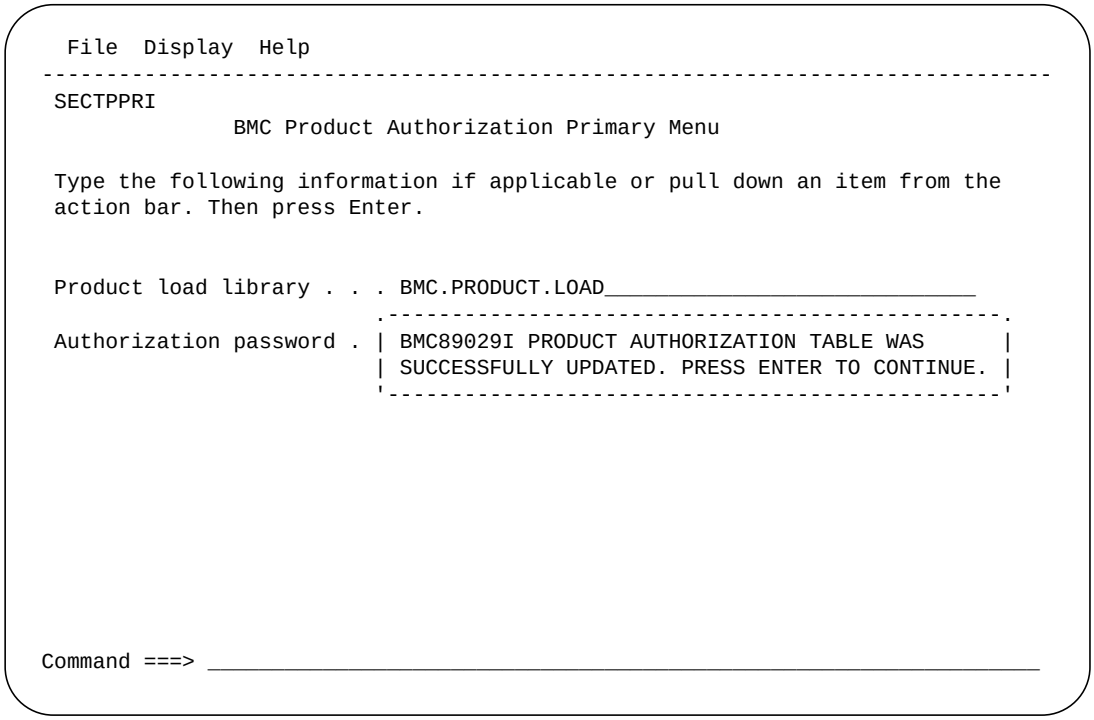


RESET Authorization for All Processors

To reset a global property (applying to all CPU IDs) of the authorization table, you are not required to specify anything beyond the product's load library and the password on the Product Authorization Primary Menu.

A popup message explains that the product authorization table was successfully updated (Figure B-10).

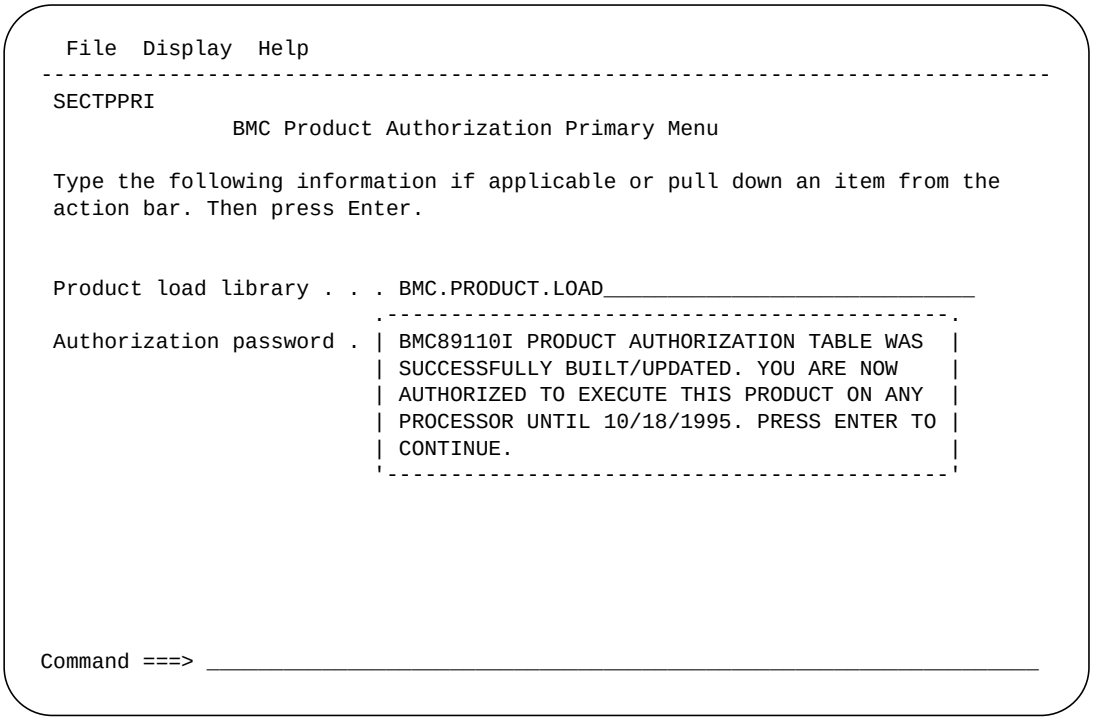
Figure B-10 Product Authorization RESET Message



Processing a Temporary Password

Use the Product Authorization Primary Menu to process a temporary password. Type the name of the product's load library and the authorization password, and press **Enter**. A popup message explains that the Product Authorization table was successfully built or updated (Figure B-11).

Figure B-11 Product Authorization Temporary Password Message



Action Bar Functions

Action bars are used to perform various tasks. Figure B-12 shows the File menu, Figure B-13 on page B-22 shows the Display menu, and Figure B-14 on page B-22 shows the Help menu from the action bar.

Figure B-12 File Pull-Down Menu

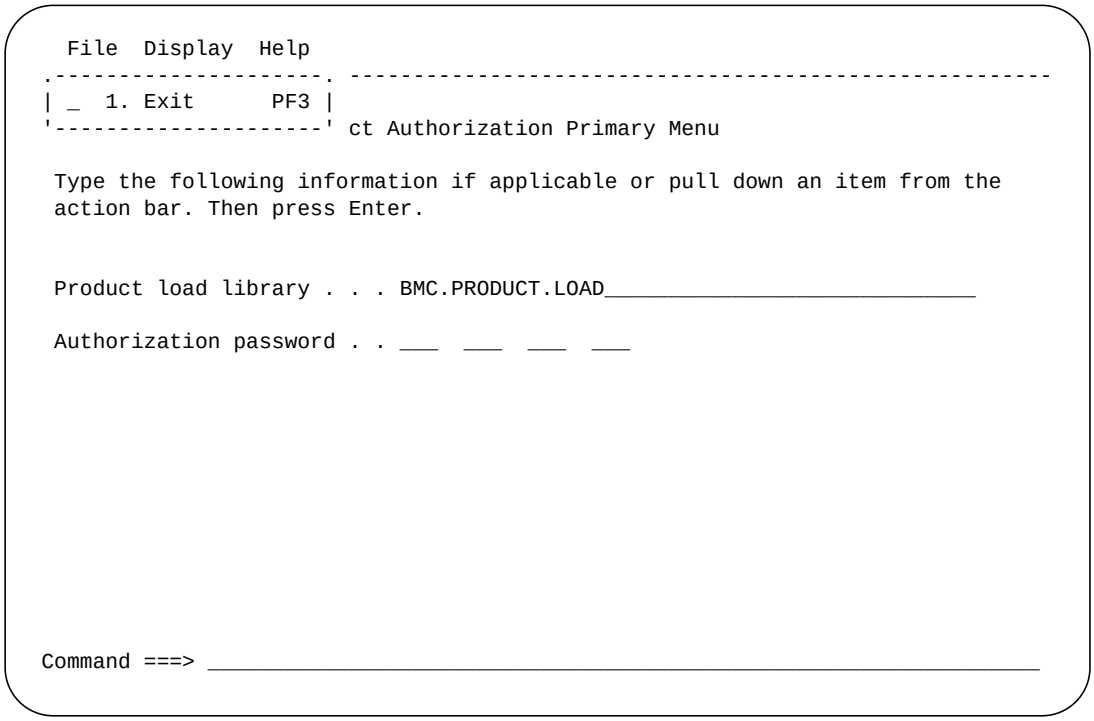


Figure B-13 Display Pull-Down Menu

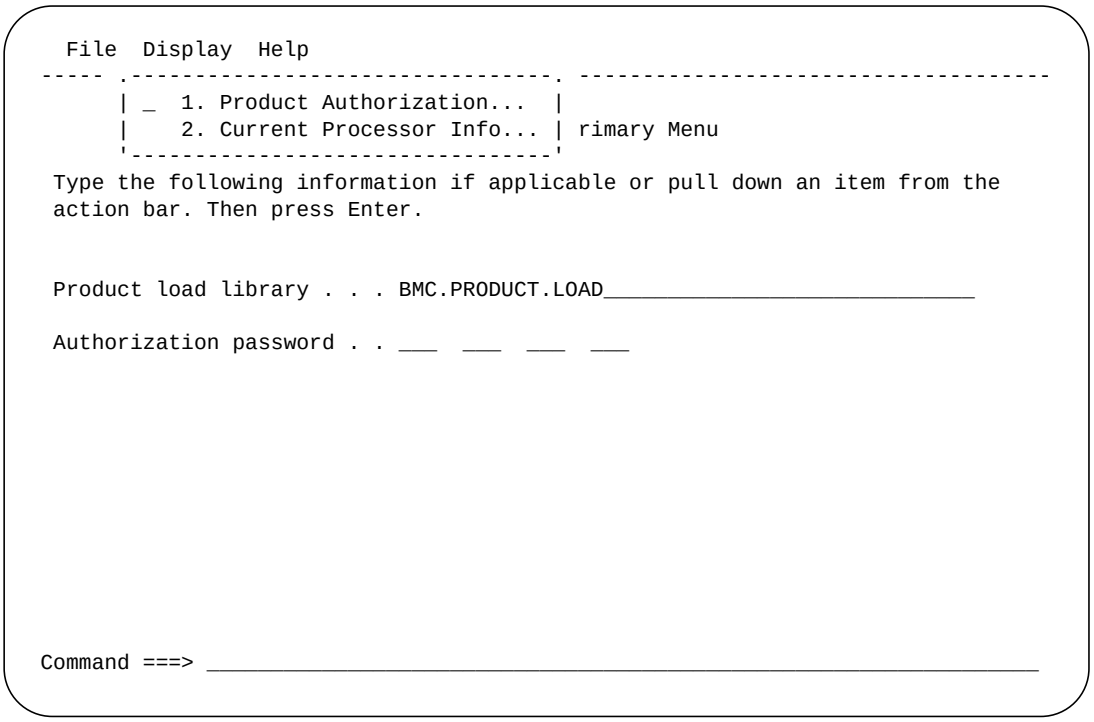
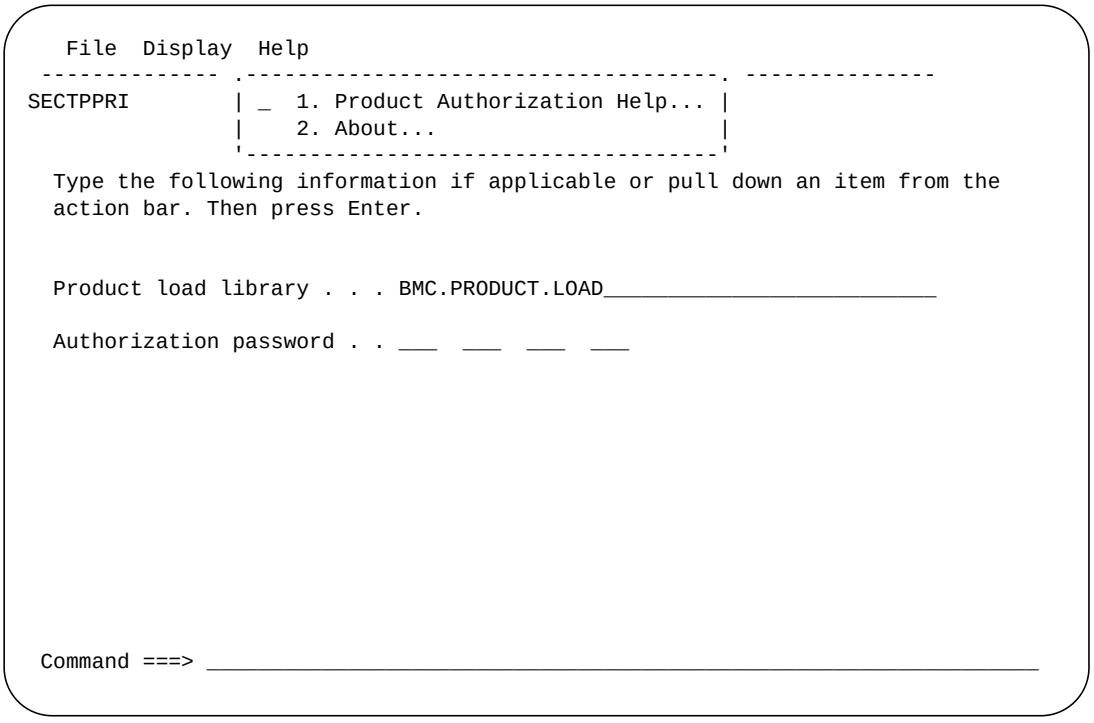


Figure B-14 Help Pull-Down Menu



Displaying Product Authorization

Use the Product Authorization Display panel (Figure B-15) to display the current authorization for a product. Select **Display=> Product Authorization** from the action bar on the Product Authorization Primary Menu (see Figure B-1 on page B-10), type the name of the product's load library or the name of the data set that contains the product authorization tables, and press **Enter**.

This panel lists the last time that product authorization for this product was changed (if at all) and the user ID or name of the job that caused the change.

Figure B-15 Product Authorization Display (SECTPTB2)

```
SECTPTB2             Product Authorization Display     ROW 1 TO 1 OF 1

Press Enter to continue.

Command ===> ____________________________________________________

   Load library . . . : 'BMC.PRODUCT.LOAD'
   Product code . . . . . . . . . . . . . . : DOM
   Last changed (mm/dd/yy-hh:mm). . . . . . : 04/15/97-11:05
   Last changed by  . . . . . . . . . . . . : DOF
   Grace period ends (mm/dd/yyyy) . . . . . : 04/29/1997
   Temporary expiration date (mm/dd/yyyy) . : 06/15/1997

Licensed Processors                                        Product
                                              Maximum      License
  Serial  Model   Version  Significant        Number of    Expiration
  Number  Number   Code      Digits     Tier  Processors   Date
   72463   3090     D4          5        000  05           NONE
************************** BOTTOM OF DATA **************************
```

Load library The name of the product's load library or the name of the data set that contains the product authorization tables.

Product code The product code for the product.

Last changed (mm/dd/yy-hh:mm)

The date and time that the product authorization tables were last modified, where:

`mm`	is month in the range 01-12
`dd`	is day in the range 01-31
`yy`	is year in the range 00-99
`hh`	is hours in the range 00-23
`mm`	is minutes in the range 00-59

Last changed by The user ID or job responsible for the modification.

Grace period ends (mm/dd/yyyy)

The date when the grace period will end after it is triggered, where:

`mm`	is month in the range 01-12
`dd`	is day in the range 01-31
`yyyy`	is year in the range 0001-9999

This line is displayed only if the failure mode is *phased* and the grace period has been triggered. The grace period can be triggered when a permanently licensed product has been executed on an unlicensed processor. Contact your BMC Software sales representative to have the grace period reset by applying a RESET password issued by BMC Software Contracts Administration.

Temporary expiration date (mm/dd/yyyy)

The date on which temporary authorization will cease or the trial will expire, where:

`mm`	is month in the range 01-12
`dd`	is day in the range 01-31
`yyyy`	is year in the range 0001-9999

If the trial or temporary expiration date has not yet been reached, you are authorized to execute this product on any processor. On the date shown, either your trial period will end or, if you are licensed for this product, you must once again execute the product on only one of the processors listed. (The temporary expiration date is that date on which you will no longer be allowed to bypass the CPU ID check or trial the product.)

Licensed processors The properties for each licensed CPU include:

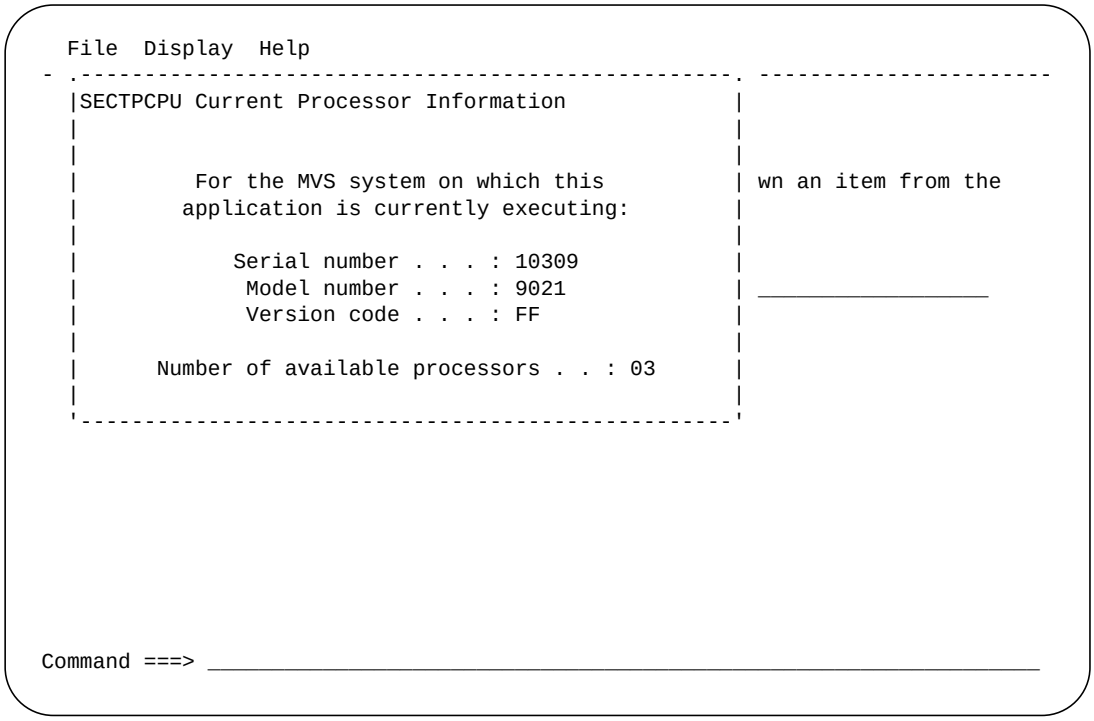
- serial number
- model number
- version code
- number of significant digits for the serial number
- tier
- maximum number of processors
- product license expiration date for each authorized password

The version code is the hardware representation of the submodel. The expiration date indicates the month and year through which you are licensed for the specific processor. In most cases, this value is **NONE**. Most of the remaining processor information is provided for reference in case you need to contact BMC Software Product Support.

Displaying Current Processor Information

Use the Current Processor Information panel (Figure B-16) to display information about the processor you are currently using. Select **Display=> Current Processor Info** from the action bar on the BMC Product Authorization Primary Menu (Figure B-1 on page B-10).

Figure B-16 Current Processor Information (SECTPCPU)



This panel displays the CPU serial and model numbers for the processor on which TSO is currently executing. It also displays the version code of the processor. The version code is the hardware representation of the submodel (for example, the “942” in “ES/9000-942” or the “600” for a 3090-600 processor). Your BMC Software product support representative might need this information if you experience problems.

Note: A version code of X'FF' indicates that MVS is running as a VM guest. This X'FF' is not the real processor version code. To determine the real version code, execute the LIST option of the Batch Product Authorization utility from an APF-authorized library. See page B-28 for more information.

This panel also displays the number of processors (also referred to as CPUs or engines) that are online to the current operating system. This information might or might not apply to your BMC Software License Agreement.

Note: The information displayed on this panel might not refer to a machine on which you are actually licensed to run a BMC Software product. This would be the case if you log on to TSO on SYSA, but execute your BMC Software product on SYSB. In this instance, your product authorization entries might only refer to SYSB.

Batch Product Authorization

This section describes the batch interface used for product authorization. If you prefer to use the online interface, see “Online Product Authorization” on page B-10

Using the batch interface, you can perform the following tasks:

- process a password
- obtain current product authorization and processor information

Executing Batch Product Authorization

Figure B-17 is a sample of a JCL script for executing batch product authorization. Product-specific JCL samples can be found in member BATSAMP in the INSTALL.JCL library. The STEPLIB DD statement must identify the load library in which the SECSEC3B program resides. This can be found usually in the LOAD data set.

Figure B-17 Sample JCL for Executing Batch Product Authorization

```
//JJJJJJJJ JOB ...................
//*
//SECSEC3B EXEC PGM=SECSEC3B,PARM='ppp'    <<<==== PRODUCT CODE
//STEPLIB  DD DSN=BMC.PRODUCT.LOAD,DISP=SHR
//*
//SYSLIB   DD DSN=BMC.PRODUCT.LOAD,DISP=SHR <<==== REQUIRED
//SYSPRINT DD SYSOUT=*                      <<<==== REQUIRED
//*
//SYSIN    DD *
****  PROCESS AN ADD PASSWORD AND LIST RESULTS ****
PSWD=AE@,82G,91#,C7$  NEWCPUID=11111-9021
****  PROCESS A DELETE PASSWORD AND LIST RESULTS ****
PSWD=BE@,AD0,32$,7C#  OLDCPUID=31091-9121
****  PROCESS A REPLACE PASSWORD AND LIST RESULTS ****
PSWD=ARF,56C,##1,C7$  OLDCPUID=31001-3390 NEWCPUID=31091-3381
****  PROCESS A RESET PASSWORD
PSWD=123,456,789,ABC
****  PROCESS A TEMPORARY PASSWORD AND LIST RESULTS ****
PSWD=AE@,B32,#1C,D7#
****  REPORT THE PROCESSOR INFORMATION AND AUTHORIZATION ****
LIST
```

JOB Varies depending on the your system.

EXEC Identifies the program (SECSEC3B) and passes the product code in the PARM= field. Replace *ppp* with the three-character product code.

STEPLIB DD Identifies the load library in which SECSEC3B resides (optional if SECSEC3B resides in LINKLIST or is specified in JOBLIB).

SYSLIB DD Required. Identifies the product load library. The product authorization tables will be stored and updated in this data set.

SYSPRINT DD Required for the program to issue messages and output from the LIST control statement.

SYSIN DD Required. Identifies the location of the control statements that define the actions the program is to take. See “Control Statements and Keywords” for a description of these control statements.

Control Statements and Keywords

Certain tasks require different input parameters. These parameters change depending on the type of password you are installing. The sample JCL shown in Figure B-17 on page B-27 shows six tasks that you can perform using the batch version of product authorization. You need to modify the JCL to include only the task(s) that you want to perform.

The following syntax rules apply to the control statements:

- Control statements are free-form. That is, they can begin in any column.
- Uppercase characters are required.
- At least one blank space must be inserted between individual keywords and data fields. Multiple blanks are acceptable.
- To insert comments, type an asterisk (*) in column 1 of each line containing the comment. Comments following keywords are not allowed.
- The LIST keyword cannot be specified on the same line as PSWD, NEWCPUID, and OLDCPUID.

Table B-4 describes the control statement keywords:

Table B-4 Control Statement Keywords

Keyword	Data	Explanation
PSWD=	12-character password formatted as four fields of three characters each, separated by either a comma or a blank (see sample JCL). Twelve continuous characters are also accepted.	Valid characters are alphanumeric (excluding the letters “I” and “O.” to avoid confusion with the numbers “1” and “0”). Valid special characters include the =, +, and @ characters. The asterisk (*) can be substituted for the “at” sign (@) when @ is not available on the keyboard.
NEWCPUID=	Five-digit serial number, followed by a hyphen and a four-digit model number.	Serial number and model number must be hexadecimal characters separated by a single hyphen.
OLDCPUID=	Five-digit serial number, followed by a hyphen and a four-digit model number.	Serial number and model number must be hexadecimal characters separated by a single hyphen.
LIST	Not applicable	Prints a report showing the contents of the product authorization tables and information about the processor on which the job is executing.

Return Codes

0 = All requests completed successfully. See SYSPRINT output for messages about each operation.

4 = A LIST was requested, but there were no tables in the load library.

8 = An error occurred that prevented completion of all your requests. See SYSPRINT output for messages about the error and any completed operations.

Appendix C Alarm Setting

This appendix provides a checklist with the steps needed to set the alarm for MAINVIEW for WebSphere. This appendix covers the following topic:

Alarm Setting Checklist

The checklist in this section contains the steps that you must perform to set the alarm for MAINVIEW for WebSphere. This checklist provides a summary of the steps that you must perform and where to find detailed instructions if you need them.

	Step	Task	Description	Reference
	1	allocate a new GROUP BBVDEF data set similar to USER BBVDEF	If you do not have the user view definition (USER BBVDEF) data set allocated, you will be asked whether a clist should create one. Indicate **Yes** to create the USER BBVDEF data set.	*MAINVIEW Alarm Manager User Guide*
	2	issue **tso isrddn** and examine the BBVDEF concatenation	In the MAINVIEW for WebSphere monitor, issue **tso isrddn** from the command line. This information is needed for Step 9.	*MAINVIEW Alarm Manager User Guide*
	3	set an alarm threshold	The alarm threshold is set in the ERRORS view.	*MAINVIEW Alarm Manager User Guide*
	4	issue **cust**	In the MAINVIEW for WebSphere monitor, issue **cust** from the command line.	*MAINVIEW Alarm Manager User Guide*
	5	issue threshold command and determine where threshold value should be set	Enter **t** for threshold on the View Customization command line and select the column where the threshold value should be set.	*MAINVIEW Alarm Manager User Guide*
	6	set condition and attribute values	These are examples of condition and attribute values: **Condition** **Attr** 1st => =**IMW0196I*** =>**9** reverse red 2nd => >**68** => **2** yellow	*MAINVIEW Alarm Manager User Guide*
	7	check for error log entries	If any error log entries match threshold values, the entries will be highlighted in the attribute color	*MAINVIEW Alarm Manager User Guide*
	8	display the Exit Views Customization panel	To display the Exit Views Customization panel, press **PF3**.	*MAINVIEW Alarm Manager User Guide*
	9	save changes to Exit Views Customization panel	To display the Save View Definition panel and save your changes, indicate **Yes**. The view is saved in the first data set of BBVDEF concatenation.	*MAINVIEW Alarm Manager User Guide*
	10	copy the USER BBVDEF data set	After the new view is saved in USER BBVDEF, copy it into the GROUP BBVDEF dataset.	*MAINVIEW Alarm Manager User Guide*

	Step	Task	Description	Reference
	11	add the GROUP BBVDEF data set	The GROUP BBVDEF data set must be added in front of BBVDEF concatenation. You must add the data set to the MAINVIEW Alarm Manager PAS and the MAINVIEW for WebSphere PAS.	*MAINVIEW Alarm Manager User Guide*
	12	start the MAINVIEW Alarm Manager PAS	Use the sample JCL provided in *hlq*.UBBSAMP(MVALPAS) to start the MAINVIEW Alarm Manager PAS.	*MAINVIEW Alarm Manager User Guide*
	13	perform a recycle	The MAINVIEW for WebSphere PAS must be recycled.	*MAINVIEW Alarm Manager User Guide*
	14	issue the **Setalarm 00** command	Within the new view, issue **Setalarm 00** from the command line.	*MAINVIEW Alarm Manager User Guide*
	15	go to the MAINVIEW Alarm Manager Easy Menu (MVALARM)	In the split screen, MVALARM will be displayed. Select **Current Alarms** and install the alarm.	*MAINVIEW Alarm Manager User Guide*
	16	save the alarm	After you install the alarm, save your selection.	*MAINVIEW Alarm Manager User Guide*
	17	verify the installation of Alarm 00	To verify the installation of Alarm 00, select **List Alarm Groups** and check the status.	*MAINVIEW Alarm Manager User Guide*

Glossary

The glossary defines BMC Software terminology. You may use this glossary in conjunction with other glossaries and dictionaries.

To help you find information, this glossary contains the following cross-references

Contrast with indicates a term that has a contrary or contradictory meaning.

See indicates an entry that is a synonym or contains expanded information.

See also indicates an entry that contains related information.

active window Any MAINVIEW window in which data can be refreshed. *See* alternate window, current window, window.

ALT WIN field Input field that allows you to specify the window identifier for an alternate window where the results of a hyperlink are displayed. See alternate window.

Alternate access *See* MAINVIEW Alternate Access.

alternate window (1) Window that is specifically selected to display the results of a hyperlink. (2) Window whose identifier is defined to the ALT WIN field. *Contrast with* current window. *See* active window, window, ALT WIN field.

API Application Programming Interface. A software interface that enables applications to communicate with each other. An API is the set of programming language constructs or statements that can be coded in an application program to obtain the specific functions and services provided by an underlying operating system or service program.

AutoCustomization Online facility for customizing the installation of products. Autocustomization provides an ISPF panel interface that both presents customization steps in sequence and provides current status information about the progress of the installation.

BBI Basic architecture that distributes work between workstations and multiple MVS targets for BMC Software MAINVIEW products.

cache A special-purpose buffer storage, smaller and faster than main storage, used to hold a copy of instructions and data obtained from main storage. A cache is used to reduce access time.

CAS Coordinating address space. One of the address spaces used by the MAINVIEW windows environment architecture. The CAS supplies common services and enables communication between linked systems. Each MVS image requires a separate CAS. Cross-system communication is established through the CAS using VTAM and XCF communication links.

CGI Common Gateway Interface. A standard for the exchange of information between a Web server and computer programs that are external to it. The external programs can be written in any programming language that is supported by the operating system which the Web server is running.

column Vertical component of a view or display, typically containing fields of the same type of information, that varies by by the objects associated in each row.

COMMAND line Line in the control area of the display screen where primary commands can be typed. *Contrast with* line command column.

CPO Customized Product Offering. Delivery and installation technique that allows any combination of BMC Software SMP/E-maintainable products to be distributed on a product tape to a customer and installed quickly. The CPO product tape contains libraries required for product customization and execution, plus SMP distribution libraries and data sets needed for application of SMP maintenance.

DASD Direct Access Storage Device. (1) A device with rotating recording surfaces that provides immediate access to stored data. (2) Any device that responds to a DASD program.

data collector Program that belongs to a MAINVIEW product and that collects data from various sources and stores the data in records used by views. For example MAINVIEW for WebSphere data collectors obtain data from IP stacks.

element (1) Data component of a data collector record, shown in a view as a field. (2) Internal value of a field in a view, used in product functions.

element help Online help for a field in a view. The preferred term is *field help*.

expand Predefined link from one display to a related. *See also* hyperlink.

field Group of character positions within a screen or report used to type or display specific information.

field help Online help describing the purpose or contents of a field on a screen. To display field help, place the cursor anywhere in a field and press PF1 (HELP). In some products, field help is accessible from the screen help that is displayed when you press PF1.

HTTP Hypertext Transfer Protocol. In the Internet suite of protocols, the protocol that is used to transfer and display hypertext documents.

hyperlink (1) Preset field in a view or an EXPAND line on a display that permits you to

- Access cursor-sensitive help
- Issue commands
- Link to another view or display

The transfer can be either within a single product or to a related display/view in a different MAINVIEW product. Generally, hyperlinked fields are highlighted. (2) Cursor-activated short path from a topic or term in online help to related information.

IP address The unique 32-bit address that specifies the location of each device or workstation on the Internet. For example, 9.67.97.103 is an IP address.

line command Command that you type in the line command column in a view or display. Line commands initiate actions that apply to the data displayed in that particular row.

line command column

Command input column on the left side of a view or display. *Contrast with* COMMAND line.

MAINVIEW BMC Software integrated systems management architecture.

MAINVIEW Alarm Manager

Monitor that reads the data elements produced by products in the MAINVIEW window environment and returns SQL-syntactic statements.

MAINVIEW Alternate Access

Enables MAINVIEW products to be used without TSO by providing access through EXCP and VTAM interface.

MAINVIEW control area

In the MAINVIEW window environment, first three lines at the top of the view containing the window information line and the COMMAND, SCROLL, CURR WIN, and ALT WIN lines. The control area cannot be customized and is part of the information display. *Contrast with* MAINVIEW display area, MAINVIEW window area.

MAINVIEW display area

See MAINVIEW window area.

MAINVIEW Explorer Product that provides access to MAINVIEW products from a Web browser running under Windows. MAINVIEW Explorer replaces MAINVIEW Desktop, the MAINVIEW window interface designed to run on OS/2 and Windows workstations.

MAINVIEW for IP MAINVIEW product that displays OS/390 application performance data that relates to how efficiently the IP stack is being used. Collected data includes: application availability, application throughput, connections, IP configuration, and response time statistics.

MAINVIEW for VTAM

MAINVIEW product that displays application performance data by application, transaction ID, and LU name. This collected data includes: connections, response time statistics, application availability, application throughput, and TN3270 statistics.

MAINVIEW for WebSphere

Product that provides full-featured monitoring and management; site-use analysis; transaction process monitoring; and display of Web Server and Web Application Server (WAS) data without the SNMP management console.

MAINVIEW Selection Menu

ISPF selection panel that provides access to all MAINVIEW windows-mode and full-screen mode products.

MAINVIEW window area

Portion of the information display that is not the control area and in which views are displayed and windows opened. It includes all but the first three lines of the information display. *Contrast with* MAINVIEW control area.

MVALARM *See* MAINVIEW Alarm Manager.

MVIP *See* MAINVIEW for IP.

MVVTAM *See* MAINVIEW for VTAM.

MVWEB *See* MAINVIEW for WebSphere.

object Anything you can manipulate as a single unit. MAINVIEW objects can be any of the following: product, secondary window, view, row, column, or field.

object ID An administratively assigned data value of the type defined in abstract syntax notation.

online help Help information that is accessable online.

PAS Product address space. Used by the MAINVIEW products. Contains data collectors and other product functions.

Plex Manager Product through which cross-system communication, MAINVIEW security, and an SSI context are established and controlled. Plex Manager is shipped with MAINVIEW window environment products as part of the coordinating address space (CAS) and is accessible as a menu option from the MAINVIEW Selection Menu.

pop-up window Window containing help information that, when active, overlays part of the window area. A pop-up panel is displayed when you issue the HELP command.

port System or network access point for data entry or exit.

port number In the Internet suite of protocols, the identifier for a logical connector between an application entity and the transport device.

product address space

See PAS.

protocol The meanings of, and the sequencing rules for, requests and responses used for managing a network, transferring data, and synchronizing the states of network components.

RAS Reliability, availability, and serviceability.

real time The processing of data by a computer in connection with another process outside the computer according to time requirements imposed by the outside process.

row Horizontal component of a view or display comprising all the fields pertaining to a single device, address space, user, etc.

selection view In MAINVIEW products, view displaying a list of available views.

server A functional unit that provides services to one or more clients over a network.

session Total period of time an address space has been active. A session begins when monitoring can be performed. If the product address space (PAS) starts after the job, the session starts with the PAS.

Simple Network Management Protocol

See SNMP.

single system image (SSI)

Feature of the MAINVIEW window environment architecture that allows you to view and perform actions on multiple MVS systems as though they were a single system. The rows of a single tabular view can contain rows from different MVS images.

SNMP In the Internet suite of protocols, a network management protocol that is used to monitor routers and attached networks. SNMP is an application layer protocol. Information on devices managed is defined and stored in the application's Management Information Base (MIB).

SSI *See* single system image.

summary view View created from a tabular view using the Summarize option in view customization. A summary view compresses several rows of data into a single row based on the summarize criteria.

system resource *See* object.

terminal session (TS)

Single point of control for MAINVIEW products, allowing data manipulation and data display and providing other terminal user services for MAINVIEW products. The terminal session runs in a user address space (either a TSO address space or a standalone address space for EXCP/VTAM access).

thread A stream of computer instructions that is in control of a process.

thread pool The threads that are being used by or are available to a computer program.

TS *See* terminal session.

UAS *See* user address space.

view Formatted data within a MAINVIEW window, acquired from a product as a result of a view command or action. A view consists of two parts: query and form.

view command Name of a view that you type on the COMMAND line to display that view.

view definition Meaning of data that appears online, including source of data, selection criteria for data field inclusion and placement, data format, summarization, context, product, view name, hyperlink fields, and threshold conditions.

view help Online help describing the purpose of a view. To display view help, place the cursor on the view name on the window information line and press PF1 (HELP).

window Area of the MAINVIEW screen in which views and resources are presented. A window has visible boundaries and can be smaller than or equal in size to the MAINVIEW window area. *See* active window, alternate window, current window, MAINVIEW window area.

window information line

Top border of a window. Shows the window identifier, the name of the view displayed in the window, the system, the scope, the product reflected by the window, and the timeframe for which the data in the window is relevant. *See also* window status field.

window number Sequential number assigned by MAINVIEW to each window when it is opened. The window number is the second character in the window status field. *See also* window status field.

window status One-character letter in the window status field that indicates when a window is ready to receive commands, is busy processing commands, is not to be updated, or contains no data.

window status field Field on the window information line that shows the current status and assigned number of the window. *See also* window number, window status.

windows mode Display of one or more MAINVIEW product views on a screen that can be divided into a maximum of 20 windows. A window information line defines the top border of each window.

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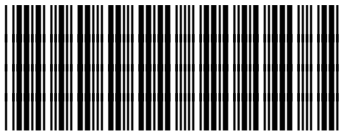

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